SECURING CANADA'S NATURAL CAPITAL:

A Vision for Nature Conservation in the 21st Century

NRTEE TRNEE

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State of the Debate

SECURING CANADA'S NATURAL CAPITAL:

A Vision for Nature Conservation in the 21st Century

NRTEE TRNEE

Mandate

THE National Round Table on the Environment and the Economy (NRTEE) was created to "play the role of catalyst in identifying, explaining and promoting, in all sectors of Canadian society and in all regions of Canada, principles and practices of sustainable development." Specifically, the agency identifies issues that have both environmental and economic implications, explores these implications, and attempts to identify actions that will balance economic prosperity with environmental preservation.

At the heart of the NRTEE's work is a commitment to improve the quality of economic and environmental policy development by providing decision makers with the information they need to make reasoned choices on a sustainable future for Canada. The agency seeks to carry out its mandate by:

- advising decision makers and opinion leaders on the best way to integrate environmental and economic considerations into decision making;
- actively seeking input from stakeholders with a vested interest in any particular issue and providing a neutral meeting ground where they can work to resolve issues and overcome barriers to sustainable development;
- analysing environmental and economic facts to identify changes that will enhance sustainability in Canada; and
- using the products of research, analysis and national consultation to come to a conclusion on the state of the debate on the environment and the economy.

The NRTEE's State of the Debate reports synthesize the results of stakeholder consultations on potential opportunities for sustainable development. They summarize the extent of consensus and reasons for disagreement, review the consequences of action or inaction, and recommend steps specific stakeholders can take to promote sustainability.

NRTEE TRNEE

Achieving a Balance *Atteindre un équilibre*

The NRTEE is composed of a Chair and up to 24 distinguished Canadians. These individuals are appointed by the Prime Minister as opinion leaders representing a variety of regions and sectors of Canadian society including business, labour, academia, environmental organizations, and First Nations. Members of the NRTEE meet as a round table four times a year to review and discuss the ongoing work of the agency, set priorities, and initiate new activities.

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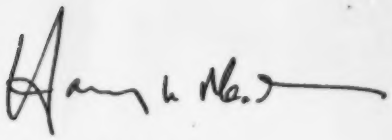
Foreword

THE National Round Table on the Environment and the Economy (Round Table) established the Conservation of Natural Heritage Program to encourage Canadians at all levels to undertake stewardship of the land and waters—publicly and privately owned—and to shape and support new tools that can be used to better conserve, restore and maintain the long-term health of ecosystems.

The impetus for this program stemmed largely from the findings of the Round Table's Millennium Program, which outlined several key challenges and opportunities for Canada with respect to nature conservation. The Conservation of Natural Heritage program marked the first time that the Round Table focused directly on the importance and implications of nature conservation for Canadian society as a whole. It is the intention of the Round Table to continue to relate these findings to issues where social and economic factors impinge on Canada's natural heritage.

As Chair of the Round Table, I am therefore pleased to introduce this *State of the Debate* report, which details the program's findings. The report is based on the work of a multistakeholder process, which brought together representatives from governments, industry, local communities, Aboriginal peoples, NGOs, and the agricultural sector to examine the state of conservation in Canada today.

The report outlines key challenges and opportunities for conservation, and presents a set of recommendations that, if applied, will position Canada as a global leader in conservation by 2010.



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"The sheer scope and diversity of our natural blessings staggers the imagination. For all Canadians, preserving the natural heritage of Canada is one of our greatest passions."

—The Right Honourable Jean Chrétien,
Prime Minister of Canada
October 3, 2002

Executive Summary

To sustain natural capital over the long term, we need to more effectively integrate ecological and economic decision making.

Executive Summary

The National Round Table on the Environment and the Economy (the Round Table) identified nature conservation as one of the key sustainability issues facing Canada at the turn of the millennium. A year later, in spring 2001, the Round Table established the Conservation of Natural Heritage Task Force, with representatives from governments, industry, communities, Aboriginal peoples, agriculture and non-governmental organizations.

The Task Force agreed on two main goals for the program:

- to encourage Canadians at all levels to undertake stewardship of the land and waters, both publicly and privately owned; and
- to shape and support new tools that will help Canadians better conserve, restore and maintain the long-term health of ecosystems.

The findings from the program have now been incorporated into this State of the Debate report, which reflects the state of play in conservation in Canada today. The report outlines key challenges and opportunities for conservation, as well as progress to date. It includes examples of best practices and an overall vision for a renewed approach to conservation for the next decade.

The report also notes some of the diverging views on key areas in conservation. The issue of how to balance the economic needs of communities with conservation goals, for example, was an important area of debate.

CANADA'S NATURAL HERITAGE

We value nature for many reasons: not only does it have aesthetic and spiritual aspects, but it also provides us with clean air and water and other ecological services on which our economy, environment and quality of life depend. These ecological services are increasingly being seen as a natural form of capital that has economic value. This realization is creating a new economic case for nature conservation around the world.

The economic case for nature conservation in Canada is also linked to the nation's role in the global economy. Nature conservation is a growing factor in the international market for Canadian natural resource products, as consumers seek to ensure that the products they buy come from sustainable, healthy ecosystems. In response, Canadian companies are increasingly seeking to demonstrate their commitment to conserving nature in order to remain competitive in global markets.

The context for conservation is changing, and new approaches are clearly needed to secure and enhance Canada's natural capital. As a result, in this report the Round Table outlines a new vision for conservation in Canada, which it encourages all governments and other key conservation partners to adopt.

This vision is to position Canada as a global leader in nature conservation by 2010, by taking innovative and decisive actions to maintain the diversity and health of our unparalleled natural ecosystems for all time. Achieving this vision will provide Canada and the world with clean air and water, abundant wildlife populations, healthy communities, and a robust, diversified economy now and in the future.

The Round Table urges the Prime Minister to lead the implementation of this national vision by convening and working with provincial, territorial, Aboriginal and local governments, each of which plays a critical role in implementing conservation solutions on the ground. The Round Table also encourages governments to work together to inspire and support stewardship by Canadians in their communities.

A STRATEGIC FRAMEWORK FOR ACTION

The Round Table has developed a strategic framework for action, and believes that this framework must be implemented in order to achieve more and better conservation in Canada. The framework features five core elements:

- design conservation solutions through integrated planning, by focusing on planning that looks at whole landscapes and considers the social, economic and environmental values of those landscapes;
- level the playing field for conservation, by encouraging industry to become a better steward of Canada's lands and seas;
- enhance stewardship by all Canadians, to encourage and support local communities in conservation planning and monitoring;
- build and share a strong base of knowledge in support of conservation in Canada; and
- value natural capital, to ensure that economic decisions formally factor in the value of nature.

The report examines the application of these core elements in four specific areas: 1) conservation planning for whole landscapes, 2) working with industry to promote whole-landscape approaches, 3) community stewardship and 4) marine ecosystems. Each of these areas represents unique and important opportunities to advance conservation on the ground and accelerate implementation of the Round Table's vision.

CONSERVATION PLANNING FOR WHOLE LANDSCAPES

Protected areas are important anchors in any conservation system. At the same time, the health of these areas depends on the health of the lands around them. Conservation planning therefore needs to take whole landscapes into account to ensure that our natural capital is secured over the long term.

The Round Table has identified several difficulties in the area of conservation planning. One of these is the failure of planning to keep pace with other pressures on the landscape—decisions about industrial development are being made more rapidly and in advance of conservation planning.

As a first priority, the Round Table recommends that governments immediately require integrated land-use planning to ensure that conservation decisions are made at the same time as, or prior to, decisions about major industrial development. All governments should adopt this approach; however, the federal government should take the lead by requiring completion of integrated conservation planning in advance of major regulatory approvals such as oil and gas pipeline construction licences.

Another difficulty with regard to conservation planning is the lack of necessary information. A robust information base is needed to identify, predict and manage existing and emerging challenges to nature conservation—now and in the future. The Round Table therefore recommends that immediate investments be directed to key federal departments, such as Environment Canada and Natural Resources Canada, and other agencies to build a strong, nationally consistent conservation knowledge database. Such a database is essential to achieving a comprehensive new vision for conservation in Canada.

WORKING WITH INDUSTRY TO PROMOTE WHOLE-LANDSCAPE APPROACHES

The Round Table's work on conservation underscored the importance of industry as a key steward in nature conservation in Canada. However, the Round Table found that there is little government support or incentives to encourage industry to take a bigger role in conservation.

As a priority, the Round Table recommends that all levels of governments adopt a series of measures aimed at eliminating known barriers to better conservation practices. For example, to facilitate voluntary surrenders by industry of areas of high conservation value, the Round Table recommends that provincial governments amend their legislation to 1) enable the creation of interim protected areas pending completion of conservation planning and 2) remove "use it or lose it" requirements when resource rights are surrendered for conservation purposes.

Over the longer term, the Round Table recommends that federal, provincial, territorial and Aboriginal governments examine their policy and legislative

frameworks to identify and remove key policy barriers to voluntary stewardship by resource industries.

COMMUNITY STEWARDSHIP

Conservation efforts must respond to the needs of local communities and Aboriginal peoples by emphasizing their role as stewards of nature, and by working to ensure that nature conservation brings them social and economic benefits.

The Round Table identified a lack of incentives and benefits for private landowners to conserve as a key barrier to accelerating conservation across Canada. Landowners are critical players in conservation, particularly in southern landscapes. Incentives directed to these landowners can play a significant role in encouraging stewardship actions.

As a priority, the Round Table recommends that the federal government take immediate steps that include the provision of specific incentives for landowners through Environmental Farm Plans and their equivalents, as well as amendments to the federal Ecogifts Program to further encourage private landowners to conserve ecologically sensitive lands.

CONSERVATION OF MARINE ECOSYSTEMS

The Round Table identified marine ecosystems as a priority area for conservation. However, pressures on the seascape, combined with complex and often uncoordinated approaches to oceans management, are rapidly preventing effective marine conservation.

As a priority, the Round Table recommends that the federal government develop comprehensive plans for establishing marine protected areas in each marine region of Canada: for the Pacific Coast by 2003, the Atlantic by 2004 and the Arctic by 2005. These plans should be based on the identification of areas of high conservation value in each region.

Another immediate step to moving conservation forward on Canada's marine front is to accelerate efforts to implement Canada's Oceans Strategy. This strategy is based on the principles of ecosystem management, sustainability, integrated management and precaution.

The Round Table therefore recommends, as another priority area, that the federal government allocate $500 million over the next five years to implement Canada's Oceans Strategy. This would enable Fisheries and Oceans Canada to speed up the application of integrated management approaches across the country and the establishment of a network of marine protected areas under the Oceans Act.

ACHIEVING GLOBAL LEADERSHIP

Canada has an opportunity to become a global leader in conservation. However, immediate steps need to be taken in order to secure the natural capital upon which we all depend. As a first priority, the Round Table calls on governments at all levels to implement the following recommendations:

1. Meet existing commitments

Canadian governments have made a series of individual and collective commitments to conserve nature over the past 20 years. Yet progress in meeting these commitments has been slow.

As a first step, the Round Table recommends that governments take immediate actions to meet their existing commitments. At the federal level, the Round Table recommends the government fulfil commitments made at the 2002 World Summit on Sustainable Development to:

- establish 10 new national parks and five national marine conservation areas; and
- restore the ecological integrity of existing parks.

In early 2003 (in the February budget and in March), the federal government announced a total of $218 million in new funding over the next five years to establish these parks and to maintain the ecological integrity of existing parks. A further $54 million per year in operational funding will be provided starting in 2008. The Round Table acknowledges the significance of this investment and believes that these are important steps toward achieving our conservation goals. However, more funding will be needed to ensure that commitments in this area are fully met.

2. Invest in conservation

Government departments and agencies at all levels do not currently have the capacity to meet their existing conservation commitments, or to plan proactively for conservation in the future.

As a priority, the Round Table recommends that the federal government invest in the establishment of a highly leveraged National Conservation Fund, modelled in part on the existing federal-provincial infrastructure program. Specifically, the Round Table calls on the Prime Minister to make an initial investment of $250 million in the fund, and to encourage the provinces, territories and conservation community groups to match that investment by a target of 3:1. The fund would support conservation activities on a project-by-project basis consistent with the priorities outlined in this report, as well as other conservation initiatives across the country.

3. Adopt clear new goals and time frames and measure progress

There is an urgent need to translate the Round Table's findings into measurable national goals and deadlines for meeting them. Once these goals are set, regular reporting would enable all Canadians to track the implementation of this approach over the next 10 years.

Consequently, the Round Table recommends that the Prime Minister establish an independent, multi-stakeholder Conservation Council, which would monitor progress on the implementation of this report's recommendations, many of which relate to initiatives such as the Canadian Biodiversity Strategy, Canada's Stewardship Agenda and Canada's Oceans Strategy. The Council would report back to the Prime Minister within 18 months of the release of this report.

These priority recommendations form part of a larger set of key measures identified by the Round Table as being crucial to the federal government's renewed commitment to nature conservation in Canada. Once implemented, these measures will help position Canada as a global leader in nature conservation by 2010.

SUMMARY OF RECOMMENDATIONS

Recommendation 1: The Round Table recommends that the federal government accelerate conservation planning in two areas where unique opportunities exist to plan in advance of major industrial development. These areas are:

- the Mackenzie Valley, where the federal government should require conservation planning prior to issuing permits; and
- Canada's boreal forests, where the federal government can work with provinces, territories and Aboriginal governments to develop a framework—which includes both protected areas and sustainable management—to sustain and conserve Canada's boreal forests.

Recommendation 2: The Round Table recommends that federal, provincial, territorial and Aboriginal governments require integrated land-use planning to ensure that conservation decisions are made at the same time as or prior to decisions about major industrial development.

Recommendation 3: The Round Table recommends that federal and provincial governments require satisfactory completion of conservation and land-use plans for major regulatory approvals such as oil or gas pipeline construction licences. At the federal level, such approvals would include permits issued by agencies such as the National Energy Board and offshore oil and gas boards.

Recommendation 4: The Round Table recommends that all governments enhance the benefits of conservation for Aboriginal communities, both through the parks establishment process and by providing Aboriginal peoples with support for or preferential access to the development of businesses built around conservation areas in their traditional territories.

An essential part of this process is the direct involvement of Aboriginal communities in determining what benefits should be realized and how Aboriginal peoples can both contribute to and benefit from initiatives such as parks establishment.

Recommendation 5: The Round Table recommends that all governments support traditional land-use studies for Aboriginal communities. This support would allow Aboriginal communities to enhance community capacity, access local knowledge and develop information systems to effectively manage and utilize that knowledge. It would also enable Aboriginal communities to effectively engage in land-use planning and management decisions.

Recommendation 6: The Round Table recommends that the federal government support efforts to provide the nationally consistent information needed to plan effectively for conservation across the country. Support would include:

- a national electronic biodiversity information network;
- a standard national classification of both terrestrial and aquatic biological communities;
- a national land-cover monitoring program;
- a national gap analysis program;
- a publicly accessible digital map and database of all conservation areas in Canada; and
- a nationally coordinated community monitoring network to provide for the specific needs of local and regional stakeholders.

Recommendation 7: The Round Table recommends that the federal government continue to support the work of Statistics Canada in developing a system of national accounts and to support the development of the Canadian Information System for the Environment (CISE). The Round Table also recommends that the nature and society research program currently being considered by the Social Sciences and Humanities Research Council establish, as a priority, research to determine the best way to value Canada's natural capital and to factor these values into decision making by all levels of government.

Recommendation 8: The Round Table recommends that federal, provincial and territorial governments examine their policy and legislative frameworks to identify and remove key policy barriers to voluntary stewardship by resource industries.

As a first step, provincial governments should:

- amend their legislation to enable the creation of interim protected areas pending completion of conservation planning; and
- remove "use it or lose it" requirements when resource rights are surrendered for conservation purposes.

This move would enable companies to voluntarily surrender areas of high conservation value with the certainty that they would not be penalized and that these areas would not be reallocated to other companies.

Recommendation 9: The Round Table recommends that the federal government accelerate efforts to conserve priority sites in highly fragmented southern landscapes by supporting local communities in planning and monitoring activities.

Recommendation 10: The Round Table recommends that the federal government establish a Canadian Biosphere Reserve Secretariat housed at Environment Canada to coordinate the work of the reserves and share best practices in engaging communities in regional conservation planning.

Recommendation 11: **The Round Table recommends that Agriculture and Agri-Food Canada and Finance Canada, in partnership with provincial governments as appropriate, introduce a suite of specific incentives for landowners through Environmental Farm Plans or their equivalents. While these incentives may vary by jurisdiction, priority should be placed on:**

- accelerated capital cost allowance claims on conservation equipment, such as flushing bars, fencing, watering and manure management facilities;
- cost-sharing for capital improvements and equipment related to conservation objectives;
- priority qualification or premium benefits for agricultural support, credit and insurance programs; and
- technical assistance and other extension and support services.

Recommendation 12: The Round Table recommends that the federal government enhance the Ecogifts Program to further encourage private landowners to conserve ecologically sensitive lands. Enhancements would include:

- removing the remaining capital gains tax on gifts of ecologically sensitive lands and easements; and
- including donations of ecologically significant lands held by corporations or individuals as part of the inventory of their businesses.

Recommendation 13: The Round Table recommends that the federal government, with partners such as the Tourism Industry Association of Canada, develop a national sustainable tourism strategy to enhance the economic benefits associated with protected areas for local communities.

Recommendation 14: The Round Table recommends that the federal government, in partnership with the Federation of Canadian Municipalities and other agencies, invest in the development of computerized and GIS-based decision-support systems that can be used by R3 and other communities in social, economic and conservation planning and community development. The Round Table has two further recommendations: 1) that Natural Resources Canada's GeoConnections program be renewed with an expanded Sustainable Communities Initiative and 2) that the expanded Sustainable Communities Initiative should include piloting the use of these decision-support systems in an additional 10 R3 communities per year.

Recommendation 15: The Round Table recommends that the federal government develop a comprehensive strategy to complete the network of Marine Protected Areas (MPAs) by 2003.

The Round Table also recommends that the federal government develop comprehensive plans for establishing MPAs in each marine region of Canada: for the Pacific Coast by 2003, the Atlantic by 2004 and the Arctic by 2005. These plans should be based on the identification of areas of high conservation value in each region.

Finally, the Round Table recommends that federal agencies with MPA programs adopt the following targets:

- five new Oceans Act MPAs by 2004 and an additional 10 sites by 2010;
- five new national marine conservation areas by 2007 and 10 additional sites by 2010; and
- five new national or marine wildlife areas by 2007.

Recommendation 16: The Round Table recommends that the federal government allocate $500 million over the next five years to implement Canada's Oceans Strategy. This would enable Fisheries and Oceans Canada, in collaboration with other federal departments, to accelerate the application of integrated management approaches across the country and the establishment of a network of marine protected areas under the Oceans Act.

Recommendation 17: The Round Table recommends that the federal government allocate $50 million over five years to:

- fund the SeaMap program as part of efforts to create a multidisciplinary, integrated national database that would form the basis for decision making about marine conservation and management in Canada; and
- identify information gaps, collect new information and conduct additional research in partnership with the Ocean Management Research Network.

The Round Table also recommends that Fisheries and Oceans Canada take the lead in producing a "state of the oceans" report for Canada every five years.

Recommendation 18: To ensure that federal conservation priorities and commitments are fulfilled, the Round Table recommends that the federal government allocate over the next five years:

- $300 million to Parks Canada for new parks and for maintaining the ecological integrity of existing parks; and
- $175 million to Environment Canada to significantly enhance the network of national wildlife areas and migratory bird sanctuaries, particularly in the North.

The Round Table also recommends that, to ensure that these new resources are employed in the most effective and integrated ways possible, these departments work with Fisheries and Oceans Canada to develop and implement a more integrated Federal Protected Areas Strategy.

Recommendation 19: The Round Table calls on the Prime Minister to make an initial investment of $250 million in a National Conservation Fund, and to encourage the provinces, territories and conservation community groups to match that investment by a target of 3:1. The fund would support priority conservation activities on a project-by-project basis consistent with the priorities outlined in this report, as well as other conservation initiatives across the country.

Recommendation 20: The Round Table recommends the establishment of a Prime Minister's Conservation Council. The Council would monitor the government's progress on the adoption of measures outlined in this report, in particular the priority recommendations, many of which relate to initiatives such as the Canadian Biodiversity Strategy and Canada's Stewardship Agenda. The Council would report back to the Prime Minister on progress within 18 months of the release of this report.

The Council would also lead the development of a conservation charter that would guide conservation priorities over the next 10 years in Canada, based on the Round Table's vision for Canada's lands and seas.

Finally, the Council would work with all sectors to raise awareness about conservation issues in Canada, focusing particularly on the role of young people in conservation.

THE ROUND TABLE'S VISION FOR CONSERVATION

The discussion below summarizes the overall vision for nature conservation proposed by the Round Table. This vision was developed through discussions within the Conservation of Natural Heritage Task Force over its two-year span, and through various consultations conducted throughout the Conservation of Natural Heritage Program.

CANADA'S forests, rivers, Arctic tundra, oceans and other natural riches are unparalleled. They have shaped our history, our economy, our communities and our sense of identity. They sustain us physically, emotionally and spiritually and provide ecological services on which our economies and communities depend. This natural legacy is precious and, like many precious things, is also fragile and fundamentally irreplaceable.

The Round Table believes that Canadians have a responsibility to demonstrate global leadership in the stewardship of natural capital. In a time when natural places disappear daily, we have a small window of opportunity to create a natural legacy for both our country and the world. Our chance to demonstrate global leadership in conservation will disappear if we do not act quickly and adopt fundamentally new approaches to nature conservation.

The Round Table believes that enhanced action is required by all Canadians and their governments in order to ensure that our natural capital is secure. We need to value ecological services in all aspects of decision making, since maintaining the health of these services is vital to our long-term quality of life and our economic strength.

To ensure conservation, we need to employ three related strategies across all of our terrestrial and marine ecosystems, whether on public or private property. These strategies are to:

- establish a complete system of protected areas that are well-connected and representative of all Canadian ecosystems and key wildlife habitats;
- adopt best practices for conservation on our working landscapes and marine ecosystems; and
- connect and integrate these strategies within the context of a whole-landscape and marine ecosystem approach.

In addition, we need to prioritize conservation decisions. Urgent action must be taken in some parts of the country where conservation opportunities are time-sensitive, as well as in ecologically intact areas where there is still the opportunity to provide for conservation in tandem with development decisions.

In our conservation efforts, we need to recognize that communities are stewards of nature, and provide these communities with meaningful economic and social benefits that contribute to their sustainability. We need to engage a broader range of landowners and other interested parties in building long-term solutions that benefit both nature *and* communities.

Finally, we need to ensure that conservation strategies work within Aboriginal treaty rights and title, and we need to forge meaningful partnerships with Aboriginal governments. Aboriginal governments and communities must be key players in development decision-making processes, and they must be given significant responsibility for land-use planning and management where their interests and lands are affected.

The Round Table believes that all Canadians take pride in their natural heritage, and that they understand that this heritage, more than anything else, defines them as a people and as a nation.

The Round Table's vision is to position Canada as a global leader in nature conservation by 2010, by taking innovative and decisive actions to maintain the diversity and health of our unparalleled natural ecosystems for all time. Achieving this vision will provide Canada and the world with clean air and water, abundant wildlife populations, healthy communities, and a robust, diversified economy now and in the future.

In the following chapters, the Round Table outlines how to begin to make this vision a reality.

While large-scale protected areas remain a critical anchor for nature conservation, parks alone are not enough to ensure key ecological functions are maintained.

Chapter 1

The National Round Table on the Environment and the Economy (Round Table) launched its Conservation of Natural Heritage Program in May 2001. The impetus for this program stemmed largely from the findings of the Round Table's Millennium Program, which outlined several key challenges and opportunities for Canada with respect to nature conservation.

IN particular, the Millennium Program found that while Canada has a responsibility to demonstrate global leadership in the stewardship of natural capital, current approaches are not adequate to meet the needs of nature conservation. For example, according to the principles of conservation biology, the simple creation of parks will not be enough to maintain our natural legacy. Rather, new approaches are needed that address the land base and marine ecosystems as a whole.[1]

The Conservation of Natural Heritage Program sought to encourage Canadians at all levels to undertake stewardship of the land and waters—publicly and privately owned—and to shape and support new tools that can be used to better conserve, restore and maintain the long-term health of ecosystems.

Program activities were overseen by a task force—the Conservation of Natural Heritage Task Force—consisting of representatives from governments, industry, local communities, Aboriginal peoples, the agricultural sector and non-governmental organizations (NGOs). Over the two-year span of the program, this multi-sector task force examined the key issues, barriers and bridges related to successful nature conservation. It also undertook consultations to obtain input from individuals and sectors across Canada. Key activities included:

- a workshop on science and traditional ecological knowledge;
- research on Aboriginal experiences with and industry's role in conservation;
- case studies examining lessons learned from land-use planning and conservation efforts across the country;[2]
- a national conference entitled Conservation that Works!; and
- a review of innovative financing mechanisms that could be used to support nature conservation.

This work has culminated in the present State of the Debate report. *Securing Canada's Natural Capital: A Vision for Nature Conservation in the 21st Century* reflects the views of both the Conservation of Natural Heritage Task Force and the Round Table as a whole.

Program scope

In electing to undertake a program on nature conservation in Canada, the Round Table tackled a very wide-ranging, complex issue. It looked at conservation through a broad lens, emphasizing the context for conservation and the importance of valuing natural capital in all sectors of Canadian society. Nevertheless, four issues emerged that were of clear importance to conservation in Canada but beyond the scope of the program's current mandate: Aboriginal governance, the role of provinces and territories in conservation, the current structure of incentives and disincentives for conservation as they apply to industry, and freshwater issues.

Aboriginal governance. The Round Table recognizes the importance of Aboriginal governance issues in Canada. Aboriginal governance pertains not only to the treaty and Aboriginal rights of Aboriginal peoples as recognized and affirmed in Section 35 of the Constitution, but also extends to the larger issue of ownership, authority over lands and waters, decision making and benefits (from activities such as

development and parks establishment). In its work on the Conservation of Natural Heritage Program, the Round Table examined Aboriginal participation in areas such as community conservation initiatives, parks establishment and management, and land-use planning.

Throughout the Program, the Aboriginal member of the Conservation of Natural Heritage Task Force raised questions as to Canada's fulfillment of the Royal Commission on Aboriginal Peoples' recommendations, as well as other longstanding reports recommending a renewed relationship with the indigenous peoples of Canada. The member would not accept the limits of *Securing Canada's Natural Capital*, as she felt it did not fully recognize the importance of fulfilling Aboriginal and treaty rights in contemporary ways, and did not address the underlying issue of an inherent right of Aboriginal governments to determine their priorities for themselves. In her estimation, self-determination is a precondition to working together to achieve the vision for conservation set out in this report.

Role of provinces and territories in conservation: Much of the land and water that sustains Canada's natural heritage is provincially owned and managed. In recognition of the provinces' important role in conservation, the Round Table consulted with representatives of these jurisdictions to ensure that this report would reflect some of the conservation perspectives and needs of these key players. However, given that the Round Table is a federal agency, the recommendations in this report are targeted primarily toward federal decision makers.

Conservation incentives and disincentives for industry: The Round Table believes that incentives that recognize and encourage conservation by industry are an important measure for furthering conservation in Canada. Although this report outlines some key challenges and opportunities for industry to become more engaged in conservation (see Chapter 7), it does not attempt to identify a comprehensive suite of incentives. The Round Table may delve more deeply into this area in future work.

Freshwater: The Round Table recognizes that freshwater issues are important to nature conservation across the country. However, time and resources did not permit an adequate examination of freshwater issues within the context of the program.

CANADA'S RICH NATURAL HERITAGE

Our economy, environment and quality of life all depend on healthy natural systems to provide us with clean air, clean water and other life-sustaining ecological services. These systems are increasingly being considered natural capital. In combination with financial and human capital, natural capital provides the fundamental underpinnings of a healthy society and economy.

As the second largest country in the world, Canada is home to diverse species and ecosystems. Almost 50 percent of the country's landbase is blanketed in forests,[3] while a quarter consists of northern tundra. Wetlands cover 16 percent, and lakes and rivers cover almost 8 percent of the country's land mass.[4] Canada's three oceans, covering an area larger than 6.5 million square kilometres, teem with a rich variety of species, from large marine mammals to the tiny phytoplankton that are the building blocks of marine life.

Canada's global share of natural capital is very rich. Canada is home to 20 percent of the world's freshwater, though only 7 percent of the world's fresh renewable water.[5] Canada has designated 36 wetlands, covering 13 million hectares, as wetlands of international importance under the Ramsar Convention. This is more in area than any other country.[6] Canada's vast landscapes and seascapes are also home to some of the largest populations of bears, wolves, caribou and beluga whales.

These natural riches do not stop at the Canadian border. Canada shares many species and ecosystems with the rest of the Americas. Approximately 13 million ducks nest in Canada's western boreal forest,[7] and an estimated 1 to 3 billion landbirds breed in the boreal regions of Canada[8] before travelling as far as Texas, Mexico and Argentina. Large carnivores such as grizzly bears and wolves, as well as migratory whales, move freely between Canada and the United States.

Canada has a unique opportunity to be a global leader in nature conservation. With a small population and large land mass, Canada still has an abundance of nature in relatively healthy condition. The sheer richness and relative integrity of our resources—particularly the immense tundra and great northern forests—may have shielded us so far from the massive loss of biodiversity that scientists are observing around the world.

THREATS TO NATURE

Direct threats

We are rapidly losing opportunities to create a lasting legacy for our wild places. Direct threats, such as development pressures—from urban sprawl to the northward expansion of forestry, mining, and oil and gas development—threaten to transform our landscapes and seascapes at an unprecedented pace over the next 10 years. These activities can fragment the habitat of key species or even convert this habitat to new uses.

Agricultural expansion, suburban sprawl and industrial development have also fundamentally altered important ecosystems such as grasslands and wetlands.[9] Agricultural expansion, for example, has converted more than 60 percent of the original grassland cover in southern Canada. Our marine ecosystems are also under stress, due to pressures such as oil and gas development, the rapidly expanding aquaculture industry, and land-based sources of marine pollution.

New threats from invasive or exotic species are emerging as well. For example, the introduction of non-native species is one of the leading causes of biodiversity loss in Canada. The accidental introduction of the zebra mussel into the Great Lakes in the mid-1980s, for example, has had a profound impact on populations of native molluscs throughout the region.[10]

Indirect threats

There are also a number of indirect threats to nature in Canada. Pollution—whether from the release of toxic substances and other pollutants or from the airborne transport of pollutants from distant sources—significantly damages our ecosystems.

Another threat that is having a serious impact on nature is climate change. In our vast northern landscapes, we are seeing the unmistakable signs of large-scale ecological change as a result of a warmer climate. Northern pack ice is melting, preventing polar bears from hunting during critical times when they need to feed their young. In the North and elsewhere, changes in the flowering times of plants, and changes in the migratory patterns of bird populations caused by rising global temperatures, have been documented in scientific journals such as *Nature*.[11]

Direct and indirect threats to nature are having an incredible impact on our natural systems, and options for maintaining our natural capital in an intact, healthy state are rapidly shrinking.[12]

MEETING THE CONSERVATION CHALLENGE

The challenges before us are great and increasingly complex. We know that our activities must remain within the limits of the earth's carrying capacity, but we do not know where those limits lie. Our challenge, then, is to understand and respect the earth's presumed ecological thresholds—before it is too late.

Yet conservation efforts in Canada are not keeping pace with these challenges. Despite ambitious conservation goals adopted over the past 10 years, governments have fallen behind in meeting their commitments.

Science and experience have demonstrated the need for an ecosystem-based approach to conservation. Conservation must strive to maintain the health of whole landscapes and marine ecosystems, with protected areas being a key component of conservation. This not only requires new approaches to the design of protected and adjacent areas, but also means that governments cannot achieve our conservation goals alone. All members of Canadian society—including industry, Aboriginal peoples, communities and NGOs—need to be engaged so that the natural basis for our economies and communities can be maintained.

The remainder of this report details the findings from the Round Table's Conservation of Natural Heritage Program. The early chapters (2 to 5) make the economic case for conservation, explore the state of conservation in Canada today, examine current initiatives that support conservation, and identify key barriers to conservation. The later chapters (6 to 10) present the Round Table's recommendations for decision makers, targeting in particular those decision makers within the federal government.

While implementing these recommendations will be an important step toward achieving conservation in Canada, they are only part of the answer. To sustain natural capital over the long term, we need to more effectively integrate ecological and economic decision making. As we do so, trade-offs are inevitable. How much are our natural systems worth? How much should we protect? And who should pay for their conservation? This last issue, which is perhaps the most contentious in the debate on conservation today, is addressed in Chapter 11. While the answers will not be simple, they are essential to our ability to manage effectively in the long term.

Chapter 2

There are many reasons to keep natural systems healthy. We protect nature because it provides places of breathtaking beauty and wonder, a source of clean air and open space in an increasingly industrialized society, and a destination for tourists from all parts of the globe seeking world-class recreation. Nature also provides a source of regional spiritual and cultural benefits.

WILD places and creatures are an essential part of the Canadian identity. Symbols of nature adorn our flag, our currency and even our sports teams. National parks are particularly symbolic for Canadians, so much so that public opinion polls show parks ranking as a more important symbol of Canadian identity than hockey.

The case for nature conservation in Canada is more than simply environmental, aesthetic or spiritual: it is increasingly economic. The growing case for conservation goes beyond the direct contribution of our natural resources to the economy to take into account the economic value of the *services* our ecosystems provide—a value we are just beginning to understand.

The direct economic contribution of our natural resources is significant. In 1996, for example, the forestry sector added more than $34 billion to Canada's trade surplus.[13] New economic sectors that depend on healthy ecosystems are also emerging. According to a recent government study, Canadians now spend $11 billion annually on nature-related activities such as birdwatching and canoeing. If visitors from the United States are included in the equation, this investment rises to almost $12 billion.[14]

Protected areas also contribute significantly to Canada's national and local economies. Revenue from nature-related activities generates $12.1 billion of Canada's GDP, and creates approximately 215,000 jobs.[15] One example of this can be found in Alberta, where revenues from visitor expenditures at Alberta's Rocky Mountain national parks (Banff, Jasper and Waterton) were estimated at $954 million in 1998.[16]

2.1 NATURE PROVIDES VITAL ECOSYSTEM SERVICES

Scientists recognize that healthy natural systems perform a series of vital functions on which our lives depend. These "ecosystem services" include air and water purification, natural pest control, pollination and flood control.[17]

One of the most critical services is watershed protection. By filtering sediments and pollutants, intact watersheds play a pivotal role in providing us with clean drinking water. They also play an essential role in managing floods and storing water—key functions on which our communities depend.

Forests also provide us with vital ecological services. Forested areas store carbon in their trees, other vegetation and even soils. This process of carbon sequestration is a critical component of the global carbon cycle that regulates the earth's climate. This service promises to become increasingly important—and valuable—as the world struggles to address the challenges of climate change. In fact, the Kyoto Protocol will create a market for sequestered carbon, making carbon an economic commodity.

2.2 THESE ECOSYSTEM SERVICES HAVE ECONOMIC VALUE

The stocks of healthy natural resources—e.g. free-standing timber, wildlife, air, water and diverse ecosystems—that provide these services are increasingly referred to as "natural capital." Although some forms of natural capital (such as land or timber) have measurable economic values, natural capital as a whole is

not assigned a direct or indirect market value, since nature provides us with these services free of charge. Consequently, our economic and business decision makers have not typically taken the value of these natural assets into account.

Although it is virtually impossible to precisely measure or place an economic value on these services, in 1998 some economists estimated their value worldwide to be $16–54 trillion per year (the gross world product that year was $28 trillion).[18]

Moreover, recent studies suggest that the economic value of wild ecosystems far outweighs the gains from converting them for human uses such as urban development, agriculture or resource extraction. A recent study indicates that a worldwide network of nature reserves both on land and at sea would cost about $45 billion a year to maintain. But this is far lower than the cost—from the loss of natural goods and services—of allowing these habitats to be destroyed. This cost is estimated at between $4.4 trillion and $5.2 trillion.[19]

The Round Table recognizes that these figures are very preliminary, and that it is extremely difficult to set the economic value of ecosystem services in any precise way. At the same time, we know that the value of these services is greater than zero—and is even greater if we accept that many of the services provided by our ecosystems have no known human substitutes. For example, while the earth produces all the oxygen that several billion people need to breathe each day, the US$200-million Biosphere II experiment was unable to reproduce this service for just eight people.[20]

Progress in valuing ecosystem services has accelerated in recent years, as a small number of governments and other innovators have begun to calculate the costs of conserving watersheds and to compare them with the costs of building mechanical plants. In a bold departure from business as usual, they were taking stock of their natural capital. In the process, they were learning how ecosystems can be seen as capital assets, supplying human beings with a stream of services that sustain and enhance our lives.[21]

These innovators are learning that it is often more cost-effective to conserve natural systems than to try to replicate or restore them. Officials in New York State, for example, faced with a price tag of $6–8 billion for a new water filtration plant, decided instead to invest in the watersheds that naturally provide clean water for New York City's 9.5 million people. The city invested $1.5 billion—a fraction of the cost of the new plant—into land acquisition, training and incentives for landowners to reduce pollution and maintain watershed health throughout the Catskill/Delaware and Croton watersheds.[22]

Conserving natural systems is clearly the most cost-effective way to maintain the ecological services they provide. What's more, there are economic opportunities associated with restoring natural systems: restoring rivers and redeveloping historic waterfronts, for example, can have a significant economic impact on local businesses and communities. The magnitude of these economic opportunities is only beginning to be understood.[23]

In addition, we are beginning to see the emergence of a "conservation economy." This is occurring through the emergence of new sectors such as outdoor recreation and ecotourism, as well as through the entry of new players into traditional economic sectors. A good example of this trend is Iisaak—the joint

THE IMPORTANCE OF NATURE TO CANADIANS

In 2000, Environment Canada released the results of its second major survey on the importance of nature to Canadians. The report showed that 20 million Canadians participated in one or more nature-related activities in 1996, and that Canada's natural capital also attracted more than one million visitors from the United States. In total, participants spent $11.7 billion enjoying these pursuits. This in turn contributed $12.1 billion toward the GDP and helped to create 215,000 jobs.[1]

[1] Statistics Canada, *The Importance of Nature to Canadians: The Economic Significance of Nature-related Activities*, 2000.

owned company with Aboriginal peoples born from the turbulent clashes over the fate of Clayoquot Sound in British Columbia (see box).[24]

Organizations such as Ecotrust Canada have emerged to support the development of the conservation economy.[25] Ecotrust works to empower communities, encourage sustainable resource stewardship, provide working capital and bring the conservation economy to life. Its programs fall into two categories:

- information services, mapping and planning to help local groups assess their resources, gain tools for informed decision making and plan for their futures; and
- lending and economic development services that provide concrete supports toward building new economic opportunities.

Bioprospecting—the search for biological sources of food, fibre and energy—is rapidly becoming an integral part of an increasingly innovative global economy. Biodiversity is responsible for an astonishing number of medical advances within our society. A broad range of pharmaceuticals—from antibiotics to antidepressants—are derived from plants, animals or micro-organisms. The over-the-counter cost of drugs from plants was estimated in 1998 to be $84 billion worldwide.[26]

In addition, a number of countries are exploring the potential to build "bio-based economies," which use renewable biological resources such as agricultural and forest crops to produce fuels, industrial chemicals, building materials and even power. Supported by advances in both plant biotechnology and industrial bioprocessing, this trend may support a shift from fossil fuels and petrochemicals while enhancing the sustainability of rural and agricultural communities. A report from the U.S. National Research Council suggests that this transition may "have the same impact on the formation of new industries in the next century as physical and chemical sciences have had on industrial development in [the last] century."[27]

IISAAK FOREST RESOURCES LTD.

Iisaak is a joint venture between the five Central Region First Nations of Clayoquot Sound and the BC Coastal Group of Weyerhaeuser. Iisaak has a timber-harvesting and forestry tenure covering approximately 87,000 hectares in Clayoquot Sound.[1]

The strategic intent of the company is to become a global example of leadership in the development of successful approaches to the management of forests with high conservation and cultural values, and the production of forest products and services. The company seeks to create maximum value from a reduced volume of timber harvest, in part through the creation of new conservation values based on environmental services, particularly carbon credits.

[1] "Iisaak: A New Economic Model for Conservation-based Forestry in Coastal Old Growth Forests, British Columbia," paper presented at a workshop entitled Developing Markets for Environmental Services, A New Role for Forests in the Green Economy, organized by the University of British Columbia, October 2000.

2.3 THE VALUE OF NATURAL CAPITAL IS A GROWING FACTOR IN THE MARKET

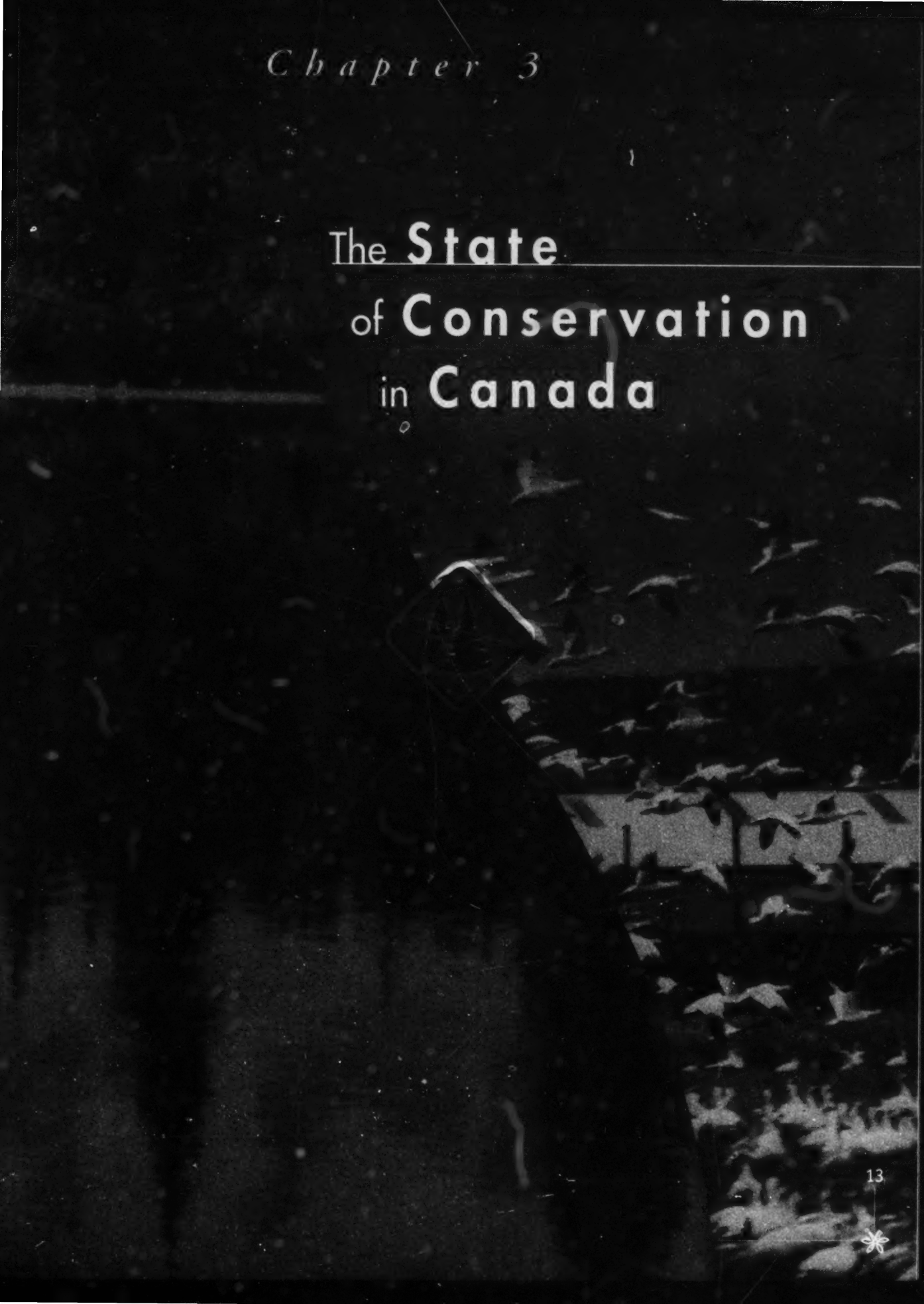
The case for nature conservation is also linked to Canada's place in the global economy. Nature conservation is a growing factor in the international market for Canadian natural resource products, as international consumers seek to ensure that the products they buy come from sustainable, healthy ecosystems. Canadian companies are feeling pressure to demonstrate corporate social and environmental responsibility in order to remain competitive in global markets. A key driver for these companies is the desire for certainty on the landscape and access to markets. Companies in all industrial sectors want to understand clearly where and how they can operate. Failure to achieve this certainty can be costly, both financially and in terms of a company's national and international reputation.

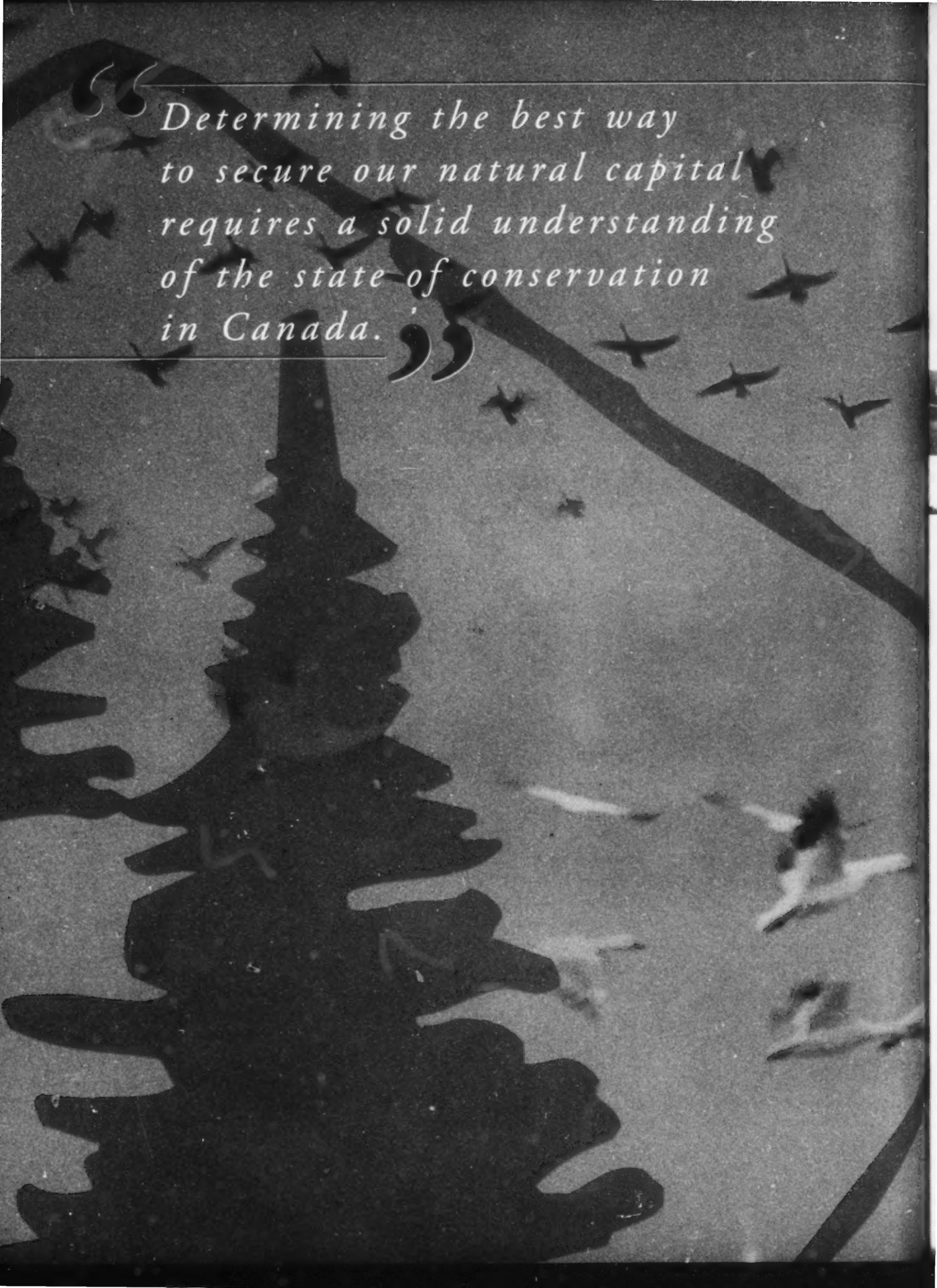
Controversy over industrial development at particular sites (such as Clayoquot Sound, the Great Bear Rainforest and Temagami) bears witness to the growing pressure from international consumers for companies to have strong environmental records. Indeed, pressure from international consumers is beginning to extend beyond the cash register to the supply chain. Highly organized and effective campaigns by environmental groups such as Greenpeace and Forest Ethics have sought to change forest practices by securing commitments from retailers, rather than from consumers, to purchase goods from sustainable sources.

To manage public expectations and their international reputations, many resource companies believe they need what amounts to a "social licence to operate." More leading companies, recognizing that society wants industrial development to be balanced with conservation, are therefore driving the creation of a new corporate environment that embraces conservation.

Chapter 3

The State of Conservation in Canada




“Determining the best way to secure our natural capital requires a solid understanding of the state of conservation in Canada.”

Chapter 3

Determining the best way to secure our natural capital requires a solid understanding of the state of conservation in Canada. This means understanding both jurisdictional responsibilities and some emerging trends that influence our approaches to conservation, in particular the emergence of new scientific knowledge and developments in Aboriginal treaty rights and title. Scientific advances, particularly in conservation biology, have informed conservation planning and management decisions over the past 20 years, and continue to be a key aspect of conservation in Canada. Aboriginal rights to land and resources have also been evolving over the last 20 years, and have extensive implications for how conservation is achieved in Canada today.

3.1 WHO IS RESPONSIBLE FOR NATURE?

In Canada, unlike many countries, the vast majority of the land mass is publicly owned: 94 percent of the country's forests are public land, with 71 percent held by the provinces and 23 percent (largely north of the 60th parallel) by the federal government.[28] On the marine side, the federal government has primary jurisdiction over the oceans and the continental shelf, while authority for the coastal zone is shared between the federal government and the provinces and territories. Because of the high level of public ownership of land and water in Canada, our governments play a greater role in nature conservation than governments in most other countries, where significantly more land is privately owned.

Legislative responsibility for nature conservation is shared under the Constitution.[29] Areas of federal responsibility generally include oceans and freshwater ecosystems, migratory birds and the management of federal lands including Nunavut and the Northwest Territories. Responsibility for management of these lands is slowly being devolved to territorial governments in the North, and as of April 1, 2003, this responsibility was devolved to the Yukon Territory. Discussions on transfer of responsibilities to the Northwest Territories are currently underway.

The federal government also has a fiduciary responsibility for lands upon which Aboriginal peoples live south of the 60th parallel, although land claims negotiations over the past 10 years have begun to cede authority over portions of the Canadian landscape to Aboriginal governments.[30]

The provinces have direct responsibility for managing the majority of Canada's publicly owned lands, and have a critical role to play in promoting conservation in their planning, permitting and monitoring programs. They are also the bridge between national goals and those responsible for implementing them.

Provincial governments have a range of instruments at their disposal to foster better conservation, including implementing conservation programs; providing incentives for individuals, communities and companies; and developing information and decision-making tools for local communities. Provincial governments also set the rules for allocating and managing lands under their jurisdiction, and can therefore design and implement the results of comprehensive conservation planning processes.

Roles in conservation

Although jurisdictional responsibility is primarily shared between the federal and provincial/territorial governments, all sectors of society can make a substantial contribution to ensuring that our natural capital is conserved for future generations.

The role of municipal governments in nature conservation is becoming increasingly important, particularly as they face amalgamation and the downloading of responsibilities from provincial governments. Municipal governments contribute to nature conservation through their decisions about planning, infrastructure development and local economic development. As the level of government closest to communities and natural resources, local governments can promote local-level stewardship and foster economic benefits associated with protected areas and other conservation initiatives in their regions.

Aboriginal communities play a unique role in conservation, in part because their traditional activities often depend on the long-term health of the ecosystems they consider home. To participate effectively in conservation planning, Aboriginal communities need support to collect traditional ecological knowledge (in part through traditional land-use mapping) and to use this information in their decision making.

Industry is emerging as a conservation leader and a source of energy and commitment. Participation in conservation initiatives by leading companies has been critical in forging consensus on conserving natural areas across the country. Companies can demonstrate leadership through innovation: by finding new ways of using resources more efficiently, setting parts of their management areas aside for conservation purposes, and gaining third-party certification that their practices are environmentally sound.

Non-governmental organizations have an opportunity to be both leaders and partners in the development and implementation of conservation solutions. NGOs play an important role in monitoring performance, leveraging opportunities and acting as catalysts for change. Given their hands-on role in delivering conservation education and activities across the country, they are also an important source of information regarding best practices and new approaches.

Individual Canadians also have an important contribution to make to nature conservation by acting as stewards of nature (often in their own backyards), holding governments accountable for their performance, and using their power as consumers to encourage companies to adopt strong conservation practices.

3.2 STRATEGIES FOR CONSERVING NATURE IN CANADA

The federal, provincial and territorial governments each have legislation, regulations and programs to establish and implement their conservation commitments. These range from wildlife management regulations and environmental assessment regimes to voluntary programs that engage landowners, industry players and individual citizens in conserving habitats and biodiversity.[31]

Government strategies for conserving land and marine ecosystems include:

- the establishment and management of protected areas;

FRAGMENTATION AND CONNECTIVITY

Habitat fragmentation is one of the major threats to biodiversity. Entire landscapes that were once connected mosaics of native habitats are now often altered or affected by human uses. Native habitats that remain may occur in patches of various sizes that are separated from one another by these altered landscapes. Many species and processes are unable to survive in human-modified landscapes, and their ability to travel between patches of native habitats has been severed. This fragmentation disrupts natural movements of animals (and their genes), seeds, spores and pollen, as well as nutrient and energy flows. Connecting these isolated patches of habitat is a critical way to ensure that natural systems continue to function well.

- managing for biodiversity on working landscapes and seascapes; and
- restoring the health of degraded ecosystems.

The extent to which each of these strategies is applied differs widely across the country, depending on conservation objectives. For example, there is significantly more potential for new protected areas in northern Canada, as development and population pressures there are less intense than in the heavily fragmented lands along the Canada–U.S. border. At the same time, there is an urgent need to secure remaining intact habitats and restore the fragmented parts of our southernmost landscapes, where a significant percentage of Canada's species are found.

Establishment and management of protected areas

Protected areas generally refer to areas protected from most human uses, including industrial development and settlement. Parks and protected areas form a core part of any nature conservation effort. Experience on every continent has demonstrated that strictly protected areas are required on a portion of land and marine ecosystems to ensure that vital elements of natural capital—namely, the full range and function of biodiversity—persist over time.

These core areas can operate as reference or control areas, which we can use to judge the success of efforts to sustainably manage the rest of the landscape, and can act as a "fail safe" where those efforts are not successful. They also provide a necessary haven for species that are sensitive to human activities. Large protected areas act as fortresses against invasive exotic species and make a considerable contribution to

- managing for biodiversity on working landscapes and seascapes; and
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human and economic health by protecting watersheds, regulating local climates and protecting soils from erosion. In addition, protected areas allow people to experience nature on its own terms and often contribute significantly to local economies.

In Canada, types of federally protected areas include national parks and park reserves, migratory bird sanctuaries, and national wildlife areas. Provincial designations vary by jurisdiction, but may include provincial or territorial parks, wilderness areas and ecological and nature reserves.[32]

The use of conservation areas to protect marine ecosystems is at an early stage of development. Marine protected areas can be established at either the federal or provincial level in Canada. Federally, areas can be protected as coastal and offshore wildlife sanctuaries (under the Canadian Wildlife Service), marine protected areas (under Fisheries and Oceans Canada), or national marine conservation areas (under Parks Canada) (see Chapter 9).

3.3 SHAPING APPROACHES TO CONSERVATION: CONSERVATION BIOLOGY AND CONNECTIVITY

Protected areas are a critical anchor in maintaining the ecological health of both wildlife and natural ecosystems. Yet a number of different approaches have also been used to guide nature conservation efforts over the past 20 years in Canada. These have included:

- protection of special elements—identifying, mapping and protecting occurrences of rare species (particularly "hotspots" where such occurrences are concentrated), watersheds of high biological value, imperilled natural communities and other sites of high biodiversity;
- representation of habitats—including a full spectrum of habitat types (e.g. vegetation, abiotic habitats, aquatic habitats) in protected areas and other areas managed for natural values[33]; and
- conservation of focal species—identifying and protecting key habitats of species that have high ecological importance or are hypersensitive to disturbance by humans.

Scientists also emphasize the need for approaches that seek to maintain specific ecological functions and services. These include:

- providing for the daily and seasonal movements of animals;
- facilitating the dispersal of animals and plants, as well as a healthy flow of genes among animal and plant populations;
- allowing for shifts in the range of species (in response to climate change, for example); and
- maintaining the flow of ecological processes (e.g. fire, wind, sediments, water).[34]

These four approaches, which are usually pursued separately, have different goals and can therefore result in very different sets of priorities. A comprehensive strategy for biological conservation requires the integration of these approaches.

While large-scale protected areas remain a critical anchor for nature conservation, conservation biology clearly demonstrates that parks alone are not enough to ensure that key ecological functions are maintained. In other words, what occurs on the lands that surround and connect protected areas is as important to the health of the park's ecosystem, and survival of the park's inhabitants, as the management of the park itself. This is, in part, because protected areas can never be large enough to meet all the needs of many migrating animals (such as caribou) or wide-ranging species such as bears, cougars, wolves or even birds and because ecological systems do no necessarily function within the boundaries of the protected area.

Consequently, conservation biology underscores the importance of maintaining ecological integrity across whole landscapes and marine ecosystems. This requires planners to apply new, integrated approaches to ensure that natural systems and functions are maintained wherever they exist on our lands and in our seas.

Further, these scientists are stressing the significance of connectivity between protected areas, as well as the need to ensure that connectivity is an integral part of any conservation agenda. Maintaining or restoring the natural connections between core protected areas is essential to the survival of many plant and animal species. These "corridors" are more than pathways by

which animals move between protected areas; they are also habitats in which animals can feed and breed. While not needing the strict restrictions of core protected areas, corridors need to be managed to provide good or at least suitable habitat and to accommodate normal patterns of movement without bringing animals into high-risk areas such as roads. To be effective, a system of protected areas needs to preserve connectivity by ensuring the conservation of natural habitat along the migratory routes of large carnivores and other key species.

These findings call for new, integrated approaches to conservation that maintain the structure, composition and, perhaps most importantly, functions of ecosystems. These approaches, in turn, will require more scientific research to understand and design potential corridors, which may be easier to implement in the North than in the more fragmented south. Northern areas, such as the boreal forest and the Arctic, as well as the oceans, offer a unique opportunity to maintain the natural connections. In areas that are more heavily developed, innovative mechanisms and tools will be needed to re-establish lost connections.

State of the debate: approaches to connectivity

There was widespread support among the participants in the Conservation of Natural Heritage Program for securing Canada's natural capital across whole landscapes and seascapes. Yet the issue of how to achieve this goal revealed an important area of continuing debate.

Most participants acknowledged that connecting protected areas was a necessary part of any plan to maintain Canada's natural capital. However, some participants raised concerns that wildlife corridors could unfairly set limits on communities in or around these corridors. Limits on industrial activity or resource extraction could impact a community's social and economic needs, when there might be few other options available.

The Round Table acknowledges that this important area of debate continues. However, consensus seems to be emerging that, within corridors, sensitive resource development can occur where wildlife movements and other habitat needs are taken into account. In this context, corridors or "special management areas" are a move toward balancing the needs of communities with the needs of wildlife.

Restoring degraded ecosystems

The restoration of ecosystems that have been degraded, damaged or destroyed as a direct or indirect result of human activities is yet another approach that Canada has used in conservation. Restoration can consist of a broad spectrum of activities, from addressing a specific barrier to ecological function to reintroducing lost species or eliminating exotic ones. The goal of these activities is to restore the ecosystem's ability to function in a natural way.[35]

Ecological restoration is difficult, time-consuming and costly, making it preferable from both an ecological and economic perspective to avoid ecological degradation in the first place. Restoration is nevertheless an important part of any conservation strategy. In Canada, it is most likely to be employed in our southernmost landscapes, where wetlands and prairie ecosystems have been significantly affected by agricultural development and urbanization. As noted in Chapter 2, there are often significant corollary economic benefits from the restoration of degraded ecosystems, particularly in urban areas.

3.4 SHAPING APPROACHES TO CONSERVATION: ABORIGINAL AND TREATY RIGHTS

For Aboriginal peoples, the legal landscape has shifted dramatically over the past 20 years, as a result of new land claims negotiations and the clarification of rights by the courts. Aboriginal rights and title have not only been constitutionally recognized and affirmed, but are also increasingly integrated into legislative and policy frameworks.

Aboriginal rights with respect to public lands generally refer to the use of certain areas for traditional and cultural activities or practices. Different Aboriginal rights may exist in different places, depending on the traditional use or occupation of the land in question. One of these rights is to harvest fish and wildlife, both within and outside protected areas.

Aboriginal rights have been clarified through a series of seminal Supreme Court decisions. One was the 1990 Sparrow decision,[36] which for the first time considered the scope and meaning of Section 35(1) of the Constitution Act, 1982, which recognizes and affirms Aboriginal and treaty rights. In this case, the Supreme Court ruled that Aboriginal peoples have a constitutionally protected right to fish for food and use wild animals and plants for social and ceremonial purposes. This right takes priority over all other rights, with the exception of the conservation of the stock in question. The Badger decision extended the same approach to treaty rights.[37]

A 1997 Supreme Court decision further clarified Aboriginal rights and title. The Delgamuukw decision found that groups or communities that can demonstrate Aboriginal title to land must be involved in any decision making that could result in an infringement on their rights. Depending on the infringement, Aboriginal peoples' consent, and potentially compensation, may be required.[38]

Land claims

Land claims agreements are also of paramount importance to First Nations and the Inuit, in part because they provide a specific vehicle for ensuring that their communities benefit from both development proposals and nature conservation. These agreements are rapidly changing the map of Canada and have broad implications for all Canadians, particularly policy makers.

Modern land claims settlements—from the James Bay Northern Quebec Agreement of 1975 to more recent agreements in the Yukon, Northwest Territories and Nunavut—now account for more than 545,000 square kilometres of land. Combined with Métis settlements in Alberta, the amount of Canadian land recognized as held by Aboriginal communities exclusively rises to almost 7 percent. With land claims negotiations underway in many parts of the country, this number can be expected to grow significantly in the next 10 years.[39]

Land claims often lead to the establishment of co-management or joint jurisdictional bodies to manage natural resources. These boards, which are composed of Aboriginal and government representatives who make recommendations on a host of environmental issues, play an increasingly important role in conservation decisions.

Other efforts to strengthen Aboriginal access to land and resources include a revenue-sharing agreement between the Grand Council of the Cree and the Quebec government. Signed in 2001, the agreement provides the Cree with an annual revenue flow from mining, forestry and

JAMES BAY NORTHERN QUEBEC AGREEMENT

The 1975 James Bay Northern Quebec Agreement established the first co-management boards in Canada. The mandate of these early bodies was primarily to provide advice on issues related to wildlife management. Co-management agreements also exist under the 1984 Inuvialuit Final Agreement (which establishes two Wildife Management Advisory Councils and a Fisheries Joint Management Committee) and the 1993 Nunavut Land Claims Agreement. The Nunavut claim is far more detailed than earlier agreements, and creates several new resource management institutions with significant decision-making powers. These boards are increasingly important players in conservation planning.

Co-management boards can also play a key role in the marine environment. Co-management arrangements under the Inuvialuit agreement, for example, led to the development of the Beaufort Sea Integrated Management Planning Initiative, which will guide decisions about multiple users and marine environment quality in the region in the face of major potential oil and gas developments in the Mackenzie Delta.

hydroelectric projects on their traditional lands and allows the Cree to participate directly in economic development on their traditional territory. A similar agreement was reached with the Inuit of northern Quebec in 2002.

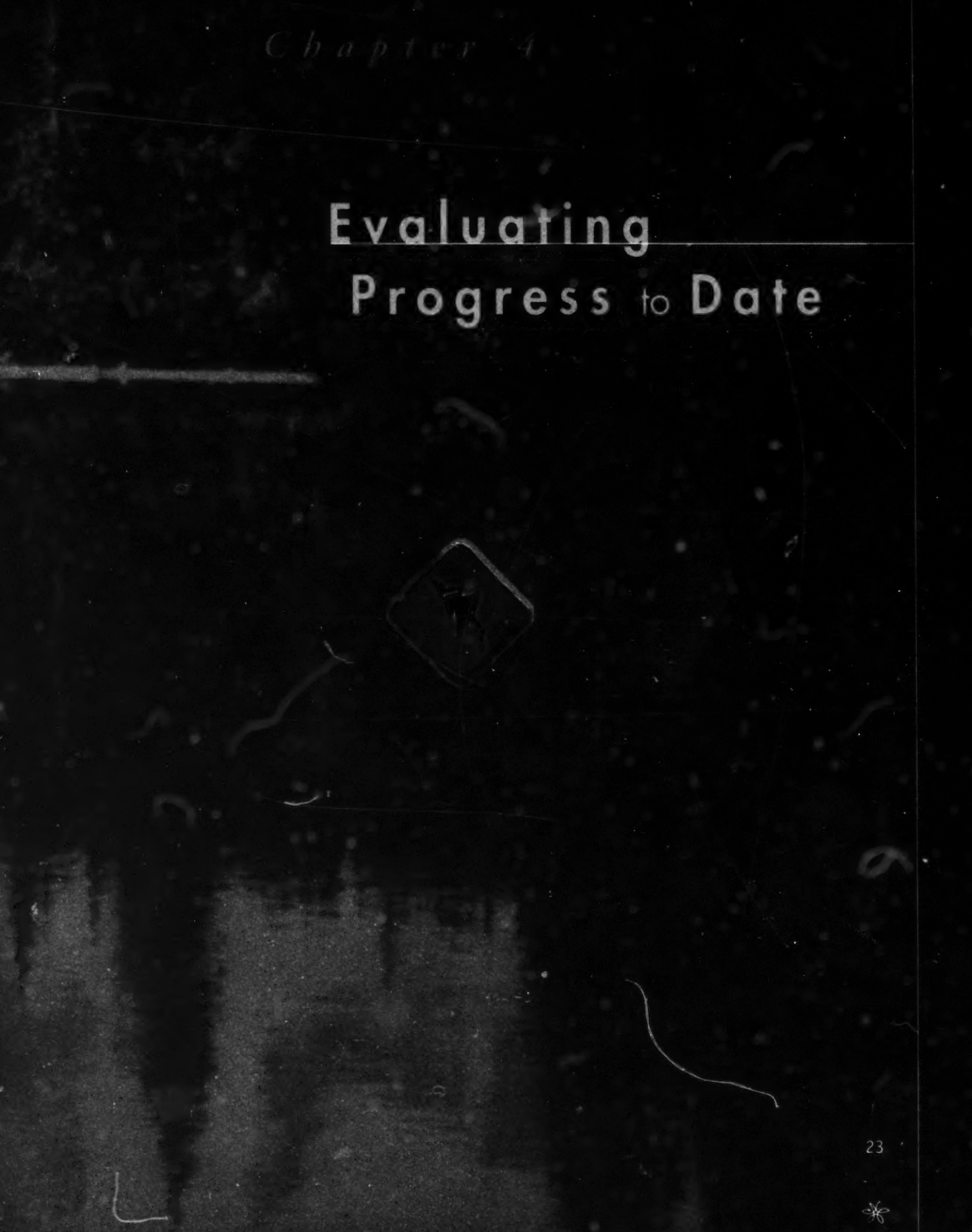
Recommendations to increase Aboriginal peoples' access to land and resources are contained in the final report of the Royal Commission on Aboriginal Peoples. Released in 1996, the report covers a wide range of issues related to the relationship between Aboriginal and non-Aboriginal peoples in Canada. Key recommendations dealing with land and resources include:

- Recommendation 2.4.27, which calls on the Crown to take interim steps to expand Aboriginal peoples' land base prior to treaty negotiations.
- Recommendation 2.4.50, which calls for the adoption of interim measures to improve access to forestry resources. Largely directed at provincial governments, this recommendation calls for:
  - promoting Aboriginal involvement in provincial forest management and planning;
  - encouraging large timber licencees to provide for forest management partnerships or joint ventures with Aboriginal firms;
  - providing Aboriginal peoples with the right of first refusal on unallocated Crown timber close to reserves or Aboriginal communities; and
  - greater flexibility in timber management policies and guidelines to reflect less-intensive Aboriginal practices and traditional activities (e.g. reductions in annual allowable cut requirements, experimentation with lower harvest rates and smaller logging areas).
- Recommendation 2.4.51, which calls on the federal government to ensure that Aboriginal peoples obtain the "full beneficial interest" in minerals, oil and gas located on reserves.

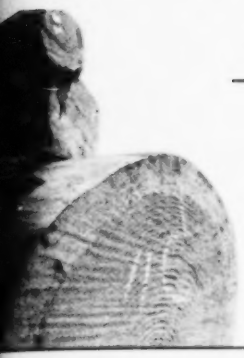
These recommendations provide an important blueprint for strengthening Aboriginal access to land and resources, both for people living on-reserve and for the many Aboriginal persons who now live off-reserve.

Chapter 4

Evaluating Progress to Date



What commitments has Canada made to conserving nature and how have we fared in meeting these commitments?



Chapter 4

What commitments has Canada made to conserving nature and how have we fared in meeting these commitments? This chapter outlines progress so far and identifies best practices used in Canada for securing our natural capital.

A TIMELINE OF SELECTED EVENTS AFFECTING NATURE PROTECTION IN CANADA, 1970–2002

1971 Federal Department of the Environment formed.

1973 Canada Wildlife Act proclaimed, laying the groundwork for initiatives such as the National Wildlife Areas.

1975 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) comes into force with Canada as a member.

1977 Committee on the Status of Endangered Wildlife in Canada established.

1981 Canada accedes to the Ramsar Convention on Wetlands of International Importance, eventually designating 36 Ramsar sites covering some 13 million hectares.

1982 Establishment of the Beverly-Qamanirjuaq Caribou Management Board, the first of several northern co-management structures intended to draw on traditional ecological knowledge and native objectives in wildlife and ocean resource management.

1986 Canada and the United States agree on the North American Waterfowl Management Plan, now the leading source of funds for waterfowl restoration projects in Canada.

1988 Committee on the Recovery of Nationally Endangered Wildlife (RENEW) established.

St. Lawrence Action Plan launched by Canada and Quebec; 1994 renewal launched St. Lawrence Vision 2000 with biodiversity as one key objective.

1989 World Wildlife Fund Canada publishes *Endangered Spaces: The Future for Canada's Wilderness* and begins the major Endangered Spaces campaign for habitat conservation based on representative areas, including completion of the national park system (at that time only 54 percent complete).

Permanent Cover Program initiated on the Prairies, with removal of almost 500,000 hectares of land from cultivation.

1990 Canada's Model Forest Network of 10 sites totalling some 8.3 million hectares established, which was later extended internationally. The model forest sites incorporate a concern for biodiversity.

North American Wetlands Conservation Council formed to advise on wetlands conservation.

1991 Green Plan announced, allocating over $170 million to protecting "Special Spaces and Species." The Plan enunciated a national long-term goal of 12 percent protected areas; it was terminated in 1995.

1992 A Statement of Commitment to Complete Canada's Networks of Protected Areas signed in November by federal, provincial and territorial ministers.

United Nations Convention on Biological Diversity ratified by Canada.

Commission on Resources and Environment (CORE) established to resolve land allocation issues in British Columbia.

1995 Ecogifts Program established and amendments to the Income Tax Act announced to increase the annual limit for tax refunds for ecological gifts from 20 to 100 percent.

1996 Federal, provincial and territorial wildlife ministers sign an Accord for Species at Risk, agreeing to provide complementary legislation and programs across Canada.

Banff-Bow Valley Study released.

1997 Canada's Oceans Act comes into force, providing a legal basis for marine protected areas.

1998 Panel on the Ecological Integrity of Canada's National Parks established to examine the "maintenance and restoration of ecological integrity within national parks."

Federal Commissioner of the Environment and Sustainable Development reports to Parliament that Canada has an "implementation gap" in meeting its obligations under international agreements, including the Convention on Biological Diversity.

1999 Canada, United States and Mexico sign the North American Bird Conservation Initiave (NABCI).

2000 WWF Endangered Spaces campaign ends on Canada Day. More than 1,000 new protected areas covering 38 million hectares had been established, about half the campaign's target of at least 12 percent of Canada's lands and waters.

Canada National Parks Act passed; creates new or enlarges existing parks and park reserves by means of order in council. Both the federal and the provincial Crowns are subject to the bill.

Amendments to the Income Tax Act reduce the income tax payable on the deemed capital gains associated with ecological gifts from 75.0 to 33.3 percent.

2001 The Round Table's Task Force on the Conservation of Natural Heritage established.

2002 Federal Species at Risk Act receives Royal Assent; deals with the listing, protection and recovery of endangered species and other species at risk within federal jurisdiction.

Approval by Cabinet of the completion of the National Parks System, July 2002.[40]

Canada National Marine Conservation Areas Act passed; provides a framework for the designation and management of national marine conservation areas.

Prime Minister announces commitment to establish 10 new national parks and five new marine protected areas.

Agriculture Policy Framework announced; revolves around five new priorities for government spending: food safety and quality, the environment, business risk management, renewal, and science and innovation.

Canada's Stewardship Agenda released, a federal/provincial/territorial stewardship initiative.

Canada commits to completing a representative system of marine protected areas by 2012 at the World Summit on Sustainable Development in September.

4.1 COMMITMENTS TO NATURE CONSERVATION

The federal government has made a series of commitments to nature conservation over the past 10 years. These include commitments to:

- complete Canada's networks of protected areas representative of Canada's land-based natural regions by the year 2000, and accelerate the protection of areas representative of Canada's marine natural regions;[41]
- create national parks in each of the country's 39 land-based natural regions;
- maintain the ecological integrity of the national parks system by establishing an Ecological Integrity Panel and implementing a plan to restore parks to ecological health;
- work toward more integrated, sustainable management of Canada's oceans, in part by enacting legislation to enable the creation of a system of marine conservation areas;

- pass legislation and create stewardship programs to protect species at risk;
- consider whether to amend the Canadian Environmental Assessment Act to require consideration of the impact of projects on parks and protected areas;
- invest in research, development and advanced information systems to enable better land use and protect water supplies from industrial and agricultural operations;
- help Canada's agricultural sector move beyond crisis management to more genuine diversification and value-added growth, new investments and employment, better land use, and high standards of environmental stewardship and food safety; and
- review incentives and disincentives to sound environmental practices.

Completion of protected areas system

As noted above, there has been a specific commitment to complete a system of protected areas in Canada. In 1992, the Canadian Parks Ministers' Council met jointly with the Canadian Council of Ministers of the Environment and the Wildlife Ministers' Council of Canada to sign a Statement of Commitment to Complete Canada's Networks of Protected Areas.

The statement committed their governments to complete a network of protected areas representing samples of all ecological regions of Canada by the new millennium. World Wildlife Fund Canada's 10-year Endangered Spaces campaign both inspired this commitment and supported and monitored the governments' progress toward this goal. Progress on the completion of a system of protected areas is discussed later in this report.

More recently, the Prime Minister announced at the World Summit on Sustainable Development in September 2002 that the federal government will create 10 new national parks and five new marine conservation areas within the next five years. In early 2003 (in the February budget and in March), the federal government announced a total of $218 million in new funding over the next five years to establish these parks and to protect the ecological integrity of existing parks. A further $54 million per year in operational funding will be provided starting in 2008. The first new national parks will likely be the Gulf Islands of British Columbia and Ukkusiksalik (Wager Bay) in Nunavut, and the first marine conservation area will likely be Lake Superior Marine Conservation Area. This new funding will also allow for progress on other commitments related to new parks and national marine conservation areas.

Other Canadian commitments to conservation

Canada is party to a number of international agreements in support of nature conservation. Most recently, Canada's conservation efforts have been informed by the 1992 United Nations Convention on Biological Diversity (CBD).[42] Canada was the first industrialized country to ratify this convention, whose objectives include the conservation of biological diversity, the sustainable use of biological resources, and the "fair and equitable sharing of benefits" from the use of genetic resources (i.e. genetic material with actual or potential value).[43] Highlighted below are some commitments to nature made by Canadian governments

IS IT PROTECTED?

The Endangered Spaces campaign set out criteria in order to determine if a park or reserve was truly protected. In order to meet campaign standards, an area had to be permanently protected—usually through legislation—and prohibit industrial uses including logging, mining, hydroelectric and oil and gas development. For marine areas, a qualifying protected area must prohibit oil and gas drilling, dumping, dredging, bottom trawling and dragging, along with other non-renewable resource exploration and extraction activities.

Source: *Endangered Spaces*, World Wildlife Fund Canada (October 2000).

over the last 10 years. This section is not meant to be exhaustive; rather, it showcases a selection of both commitments and programs created in response to these commitments.

Canadian Biodiversity Strategy: This is a framework for action by federal, provincial and territorial governments, as well as non-governmental actors. Developed in 1994 in response to the CBD, it is the first national framework for the conservation of Canada's natural systems. The Strategy's five goals are:

- to conserve biodiversity and sustainably use biological resources;
- to enhance our understanding of ecosystems and our resource management capability;
- to promote an understanding of the need to conserve biodiversity and sustainably use biological resources;
- to provide incentives and legislation that support the conservation of biodiversity and the sustainable use of biological resources; and
- to work with other countries to conserve biodiversity, use biological resources sustainably and share equitably the benefits from the use of genetic resources.

Signatories to the Strategy included all provinces and territories. All agreed to pursue these goals according to their policies, plans, priorities and fiscal capabilities, and to report regularly to the public on progress in meeting these commitments. However, while it outlines key strategic directions related to the five goals, the Strategy contains relatively few measurable commitments with specific time frames. Instead, more specific commitments have either been announced by individual jurisdictions or negotiated on a case-by-case basis on specific issues such as protected areas and species at risk.

Recently, the Strategy has given rise to some important initiatives. For example, the Federal/Provincial/Territorial Biodiversity Working Group was mandated by wildlife ministers in September 2001 to identify national and crosscutting priorities for action under the Strategy. This group is currently advancing work in the areas of biodiversity science capacity, biological information management, status and trends monitoring and reporting, alien invasive species and stewardship.

Canada's Stewardship Agenda: This is another example of a joint federal, provincial and territorial initiative that addresses conservation. Endorsed by the Joint Resource Ministers' Councils in 2002, the Agenda is intended to establish a broad, long-term course of action for stewardship, foster collaborative stewardship actions, and identify priorities for future investment in stewardship in Canada. All three levels of government will further the development of the Agenda by identifying options to support stewardship that are appropriate for each jurisdiction.

NORTH AMERICAN BIRD CONSERVATION INITIATIVE

In June 1999, government leaders from Canada, the United States and Mexico signed the North American Bird Conservation Initiative (NABCI), an agreement that encourages international cooperation to conserve the continent's bird species. The initiative is designed to increase the effectiveness of existing and new bird conservation programs, enhance coordination between organizations and foster greater international cooperation. National coordination of NABCI in Canada occurs through the NABCI Canada Council, chaired by the Assistant Deputy Minister of Environment Canada's Environmental Conservation Service. Council members include representatives from provincial governments, non-governmental organizations, and partners from Canada's four major bird initiatives: the North American Waterfowl Management Plan, Partners in Flight Canada, the Canadian Shorebird Conservation Plan, and the North American Waterbird Conservation Plan. The success of NABCI depends entirely on the active participation and enthusiasm of individuals, wildlife organizations and government agencies internationally.

Source: Environment Canada, Migratory Bird Conservation, www.cws-scf.ec.gc.ca/birds/nabci_e.cfm

Accord for the Protection of Species at Risk: This accord was signed by federal, provincial and territorial ministers responsible for wildlife in 1996.[44] Subsequently revised to highlight the importance of stewardship programs, the Accord includes commitments by all governments to establish legislation and programs that:

- provide an independent process for assessing the status of species at risk;
- provide immediate legal protection, as well as habitat protection, for threatened or endangered species;
- implement recovery plans for threatened or endangered species; and
- undertake preventive measures to prevent species from becoming at risk.

NORTH AMERICAN WATERFOWL MANAGEMENT PLAN

The North American Waterfowl Management Plan (NAWMP) is an international partnership initiated in the late 1980s that brings together all levels of government, industry and NGOs interested in maintaining healthy populations of waterfowl and their habitats. The NAWMP has been instrumental in leveraging funds from both Canada and the United States to protect habitat (by, for example, purchasing and protecting or restoring prairie potholes). Working together on a series of regional joint ventures, NAWMP partners have successfully conserved almost 700,000 hectares of wetland, shoreline, grassland and woodland habitat.[1]

[1] www.nawmp.ca/eng/real_e.html

4.2 PROGRESS TO DATE

By any measure, progress in meeting the commitments outlined above has been slow. Between 1989 and 2000, the total amount of Canada's land base in protected areas doubled, reaching almost 7 percent. However, *less than one third of Canada's terrestrial natural regions are adequately or even moderately represented by protected areas.*[45]

At the federal level, despite commitments in three consecutive Throne Speeches and a deadline of 2000, 14 of Canada's 39 natural regions are not yet represented by a national park.[46] Progress has been even more limited in the marine context (see Chapter 9).

While formal designation of protected areas is important, the ecological integrity of these areas must be maintained in practice. The federally commissioned Panel on the Ecological Integrity of Canada's National Parks concluded in 2000 that the ecological integrity of the vast majority of Canada's national parks was at risk. Of Canada's 39 national parks, 31 reported significant to severe ecological stress as a result of human activities in and around park boundaries, and 13 reported that the situation had grown worse since 1992.[47]

The panel recommended that an additional $328 million be invested over five years to safeguard national parks, and that annual investments of approximately $83 million follow.

The federal government has released a response to the panel's report, and allocated some funds toward this priority in the March 2003 commitment to implement the Action Plan for Canada's National Parks and Marine Conservation Areas and in the February 2003 budget. However, it is still much less than the panel recommended.

4.3 BEST PRACTICES IN CANADA

While progress in securing our natural capital has not been sufficient, a number of innovative conservation approaches and initiatives have begun to emerge.

Forging innovative partnerships

The last 10 years have shown what can be achieved when divergent sectors—including industry and NGOs—come together to find novel ways to conserve important natural areas. In coastal British Columbia, for example, environmental groups, Aboriginal peoples and Weyerhaeuser (formerly MacMillan Bloedel) reached a historic agreement in 2000 to protect more than 100 intact valleys, putting an end to years of intense local, national and international conflict.[48]

PROGRESS UNDER THE ENDANGERED SPACES CAMPAIGN, 1989—2000

Jurisdiction	Percentage of province/territory protected[1]	Size of protected areas (in hectares)	Percentage increase in protection
British Columbia	11.40	10,770,100	6.15
Yukon	10.38	5,008,000	3.71
Alberta	9.99	6,612,303	1.46
Ontario	8.74	9,405,300	3.95
Manitoba	8.61	5,579,883	8.12
Nova Scotia	8.30	458,615	5.79
Saskatchewan	6.01	3,912,800	3.04
Northwest Territories/Nunavut	5.22	17,941,954	1.65
Newfoundland and Labrador	4.32	1,749,526	3.41
Prince Edward Island	4.19	23,709	3.13
New Brunswick	3.17	231,116	2.24
Quebec[2]	4.31	6,646,278	3.91
CANADA	**6.85**	**68,339,584**	**3.37**

Notes

[1] Logging, mining and oil, gas and hydroelectric development must be prohibited by regulation within the protected area boundaries (Endangered Spaces campaign minimum protection standards).

[2] These numbers reflect the Government of Quebec's data on protected areas. However, according to WWF-Quebec and the Union québécoise de la conservation de la nature, these numbers include protected areas that include development activity occurring within them. According to WWF's methodology, these do not qualify as protected areas. Specifically, commercial logging on Anticosti Island and mining on caribou calving grounds in northern Quebec change the percentage of protection. Accordingly, NGO data would read as follows: percentage of province protected: 0.51%; size of protected areas (in hectares): 856,445; and increase in protection: 0.15%. With the recent addition of new protected areas, the NGO data as of February 2003 would be 2.65%, or 4,475,795 protected. Personal communication, WWF-Canada, Quebec Office, February 2003.

Source of table : See *Endangered Spaces*, World Wildlife Fund Canada (October 2000).

In addition, parks agencies are beginning to work with Aboriginal peoples in new ways, and are using a variety of new tools to identify, design and manage areas of high conservation and cultural value, particularly in the North. Vuntut National Park, for example, was established in 1995 as part of the Vuntut Gwitchin First Nation Final Agreement. The Gwitchin advocated the establishment of a national park as a way of ensuring the survival of the caribou herd that supports their traditional way of life. Vuntut National Park represents a new era in parks establishment: for the first time, Aboriginal peoples could envision a park that protects an area for, not from, their use.[49]

ROOM TO GROW FRAMEWORK

Signatories to the Ontario Forest Accord identified the need to develop a process for sharing permanent increases in wood supply between additional protected areas. This is to ensure that measures to make resource use more efficient, or to generate higher wood volume to offset the creation of protected areas, did not unintentionally put new pressures on the landscape. For this reason, they conceived Room to Grow—a policy framework that ties the expansion of any new wood supply to an equivalent expansion of protected areas in the province. Adoption of this framework eliminates a key structural barrier to better conservation by providing certainty to all players that intended conservation results will be achieved.

Source: Room to Grow, Final Report of the Ontario Forest Accord Advisory Board on Implementation of the Accord (March 2002) available at www.mnr.gov.on.ca/MNR/oll/ofaab/room2grow.pdf

Industry as a leader in conservation solutions

Some of the most significant conservation successes over the past five years have been implemented by individual companies, particularly within the forestry sector. Goodwill on the part of these companies has led to significant conservation partnerships and achievements.

Examples of these conservation partnerships include the Ontario Forest Accord, which was signed in 1999 by three leading forest companies (Tembec, Abitibi-Consolidated and Domtar), the Ontario government and the Partnership for Public Lands (Wildlands League, Federation of Ontario Naturalists and World Wildlife Fund Canada). This accord identified 378 new protected areas and introduced a "Room to Grow" framework (see box) that links further increases in wood supply to increases in protected areas.

Another important example of industry playing a leadership role in conservation occurred in Alberta's Whaleback, where more than 70,000 acres were protected as a result of an innovative agreement between environmental groups and the oil and gas industry. BP Amoco, which had petroleum and natural gas licences for the area, agreed to relinquish and donate these rights to the Nature Conservancy of Canada so that the area could be protected under the province's Special Places process.[50]

Managing for biodiversity on working landscapes and seascapes

As discussed in the previous chapter, what occurs on the lands and seas that surround and connect protected areas is as important to the survival of a park's biodiversity as the management of the park itself. Managing for biodiversity on land and seas requires the involvement of a broad spectrum of landowners and land users, including key industrial players in the forestry, mining, and oil and gas sectors, as well as fisheries and shipping.

2002 JOHANNESBURG WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT: CANADA'S COMMITMENTS

At the Summit, the federal government reiterated its commitment to:

- create 10 new national parks;
- establish five new national marine conservation areas, including representative networks by 2012; and
- accelerate work to restore the ecological health of Canada's existing parks, in response to recommendations made by the Panel on the Ecological Integrity of Canada's National Parks in spring 2000.

Once established, the new parks are expected to increase the area covered by Canada's national parks system by 50 percent.[1]

[1] www.parkscanada.gc.ca/apps/cp-nr/release_e.asp?bgid=570&andor=bg

In Canada, many strategies can be employed to conserve nature and maintain biodiversity on a working landscape. Many forestry companies, for example, have adopted an ecosystem-based management approach in which they attempt to model their practices on natural systems.[51]

Managing for biodiversity may also include setting aside sensitive habitat or wetland areas, investing in post-harvest regeneration to re-establish a forest similar to the one harvested, restoring or rehabilitating key riparian areas, and introducing monitoring programs to measure progress toward sustainable forest management. Efforts have been made in other sectors as well. For example, shipping lanes have been moved to accommodate marine mammal movements, and land contaminated by mining operations has been reclaimed and used for other purposes.

Fostering connectivity and whole-landscape approaches

New methods for maintaining and enhancing connectivity across the landscape are emerging across North America. The Yellowstone to Yukon Conservation Initiative, for example, is promoting an interconnected network of large protected areas and landscapes, with a variety of conservation designations, through which wildlife can move freely throughout the entire Rocky Mountain range. The Baja to Bering Initiative has a similar mandate in the Pacific marine environment.

In Canada, there are many more options for a whole-landscape approach to conservation than just set-aside areas or parks. These include new designations such as wildlife areas (where traditional activities such as hunting, trapping and fishing are allowed) or legislated "special management zones." First used in the Muskwa-Kechika Management Area in British Columbia (see box), these zones are open for some industrial development, but it is much more controlled than in non-designated areas.

Harnessing the power of the market

Opportunities for new partnerships and approaches to conservation are growing as the market begins to reflect conservation priorities and conservation becomes integrated with the bottom line of leading companies. These initiatives are still in their infancy, but are likely to grow significantly in the next 10 years.

Third-party certification, particularly within the forestry sector, is one example of a market mechanism that enables consumers to recognize leading companies that are going beyond regulatory requirements and charting a more sustainable future. These certification systems include standards developed by the Canadian Standards Association, the Forest Stewardship Council, and the American Forest & Paper Association's Sustainable Forestry Initiative.

The same is true in the agricultural sector. Federal, provincial and territorial ministers of agriculture have developed an Agriculture Policy Framework—a new vision for the agricultural sector that focuses on developing new forms of income security and preparing the sector for changing world markets.

An important component of the Agriculture Policy Framework is the enhancement of environmental performance. Ministers are working on a comprehensive plan for accelerated environmental action that will achieve measurable goals for air, water and soil quality, as well as for biodiversity. They anticipate that these measures will foster innovation

ENDANGERED SPACES: A FRAMEWORK FOR ACTION

The Endangered Spaces campaign was launched in 1989 by World Wildlife Fund Canada (WWF-Canada). The goal of the campaign was to complete a network of protected areas representing all 486 natural regions of Canada by 2000. WWF-Canada gathered more than 600,000 signatures to a "Wilderness Charter" in the initial stages of the program, and by 1992 had convinced all governments in Canada to adopt the campaign's goal as a national commitment. The campaign, which ran until July 1, 2000, was instrumental in protecting more than 38 million hectares of land, and led to the establishment of processes for creating over 1,000 protected areas across the entire country.[1]

[1] See *Endangered Spaces*, World Wildlife Fund Canada (October 2000).

and support a major transition within the industry that will provide it with a premier sustainability "brand" or market niche with which to distinguish itself in the emerging markets of the 21st century.

Providing incentives for private landowners

The last 10 years have also witnessed an increase in conservation agreements and other tools that support habitat conservation on largely private working lands. These voluntary agreements include landowner contracts, easements and covenants and often involve partnerships between conservation organizations and landowners. They have been quite successful in securing conservation areas on ecologically significant lands.

There has also been growing recognition of the need to provide incentives for landowners to engage in habitat, water and soil conservation. One such incentive was the Ontario Land Stewardship Program, which provided grants for the adoption of conservation farming practices that enhanced and sustained agricultural production and improved soil resources and water management. More than $9 million was paid to farmers from 1989 to 1993 in the form of research, technical and financial assistance.

Revisions to the federal Income Tax Act have also increased incentives for private landowners. Until 1995, the Act allowed donations of land to registered charities and municipalities, but the receipt could only be applied against 20 percent of the donor's income each year. After 1995, this restriction was lifted and donations could be applied against 100 percent of the donor's income, removing the former ceiling on deductibility.

Additional amendments in 1998 confirmed that gifts to the Crown certified as ecologically sensitive lands would be treated in the same way as other ecological gifts to qualified recipient charities and municipalities. As such, all ecological gifts to the Crown are deductible against up to 100 percent of a taxpayer's annual income.

INNOVATION IN ACTION: THE MUSKWA-KECHIKA

The Muskwa-Kechika Management Area, initiated in the early 1990s by a loose coalition of conservationists and tourist operators, is one of the leading models of land-use planning and conservation biology. British Columbia's imposition of a two-year restriction on new vehicle access in the area, combined with the establishment of comprehensive land-use planning, set the stage for this unique management agreement.

Participants on the planning table ultimately agreed to establish large protected areas (one million hectares) surrounded by special management areas (three million hectares) where logging, mineral exploration, and oil and gas development are allowed to take place in ways that are sensitive to wildlife and conservation values. British Columbia enshrined the consensus-based outcomes in legislation and established a trust fund to support ongoing research, development and monitoring in the region.[1] With continued engagement by industry, conservation groups, First Nations and local communities, the Muskwa-Kechika Management Area is an example of a "good way to a good place."

[1] www.nrtee-trnee.ca/eng/programs/Current_Programs/Nature/Case-Studies/KMA-Case-Study-Brief_e.htm

"Our collective vision is for a Canadian agriculture industry in the 21st century that is strong and healthy, with access to international markets, and one in which consumers have complete confidence in our products. Our vision is for a sector that is branded number one in the world. A sector fuelled by innovation and the latest research... and squarely based on the highest standards of food safety and environmental protection. Other countries—our competitors—are starting to move ahead in these areas. We cannot and will not be left behind in our bid for consumer confidence."

—Agriculture and Agri-Food Minister– Lyle Vanclief
June 28, 2001
See www.agr.gc.ca/cb/speeches/s010628e.html

Finally, the federal budget in February 2000 announced that the capital gains inclusion rate for ecological gifts would be lowered to one half of the general inclusion rate. Given that the general inclusion rate was dropped from 75 to 66 percent, this resulted in an inclusion rate for ecogifts of 33 percent. In October of that year, the general inclusion rate was lowered still further to 50 percent, bringing the rate for ecogifts down to 25 percent. Although more action is needed, more than 260 gifts representing over $49 million have been made since the program was first introduced, protecting nearly 21,000 hectares.[52]

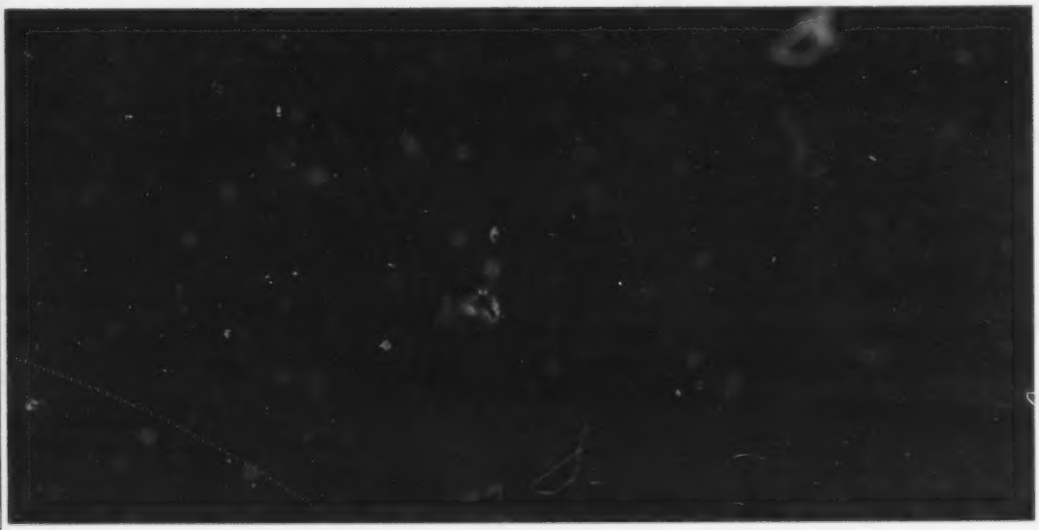
PROGRESS IN PROTECTING SPECIES AT RISK

The federal government committed in 1999 to introduce legislation and stewardship programs and work with the provinces and territories to protect species at risk and their habitats.

The 2000 federal budget provided $45 million over five years for stewardship programs to preserve species and habitats. Amendments to the Ecogifts Program have also made it easier for people to donate ecologically sensitive lands as a way of protecting species at risk.

The federal Species at Risk Act (Bill C-5) received Royal Assent in December 2002. The Act provides immediate legal protection for endangered species under federal jurisdiction (e.g. migratory birds, aquatic species and species on federal lands) and their residences. In addition, the Act establishes a recovery planning process that addresses major threats to the species (such as habitat loss or pollution). Where provinces fail to act to protect an endangered species, the legislation provides a federal safety net, allowing the Minister of the Environment to intervene and provide additional protection for a given species. The Act is expected to come into force in summer 2003.

Finally, the February 18, 2003, federal budget announced an investment of $33 million over two years for the implementation of Canada's Species at Risk Act. The funding is to be allocated as follows: $13 million for fiscal years 2003–2004, and $20 million for 2004–2005.

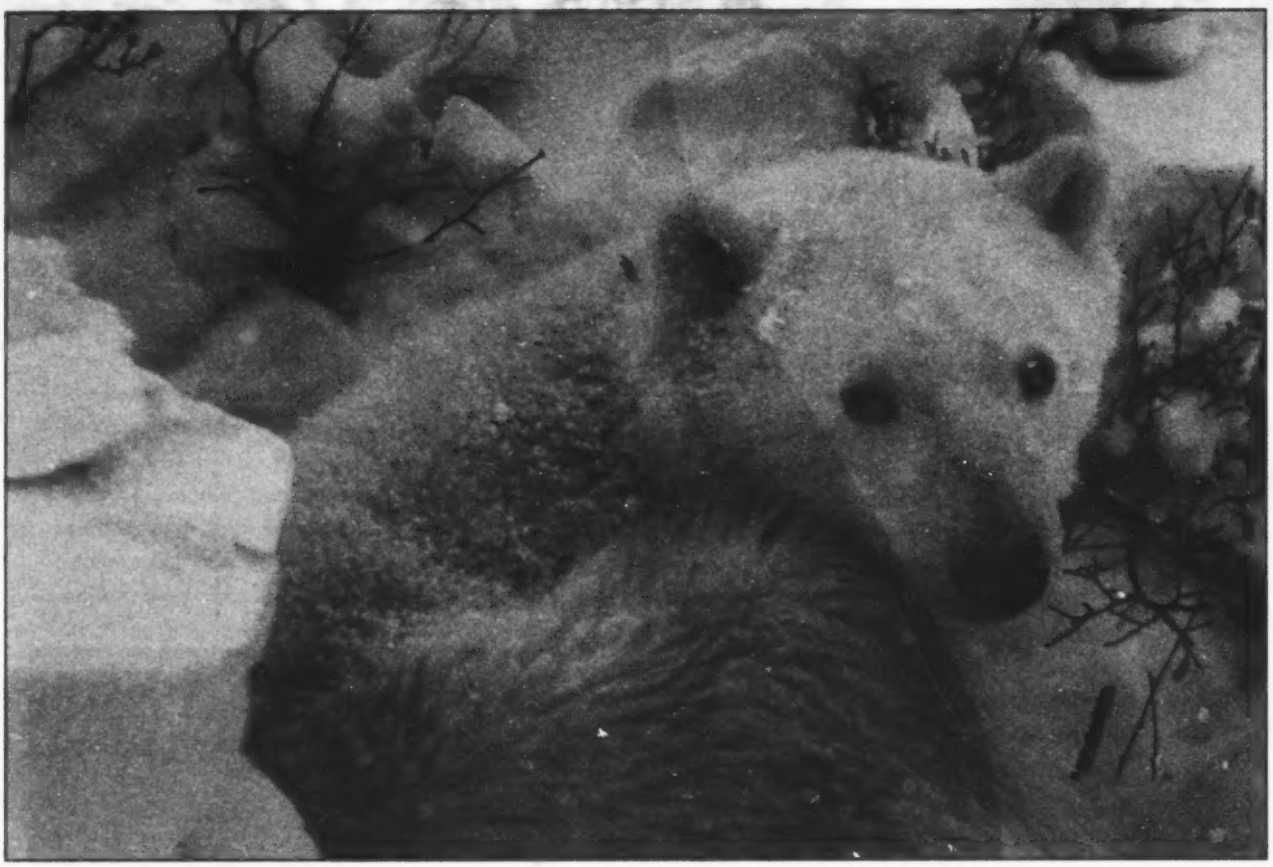


MANITOBA PROPERTY TAX CREDIT PILOT PROGRAM

Manitoba's pilot municipal property tax credit program has demonstrated that even a small municipal tax credit can serve as an incentive for conservation. In two municipalities, a $1-per-acre property tax credit was provided each year to landowners who adopt specified environmentally sustainable land-use practices. Participation was voluntary. Land was eligible for the tax credit if it was used to create or maintain conservation cover (e.g. vegetation that may include tame forage, native grassland, wetlands, riparian buffer zones and annual cropland with a minimum of 40 percent straw cover). While the tax credit was clearly worth less than the total ecological services provided by the land, it did provide some compensation to landowners for allowing society to benefit from conservation. The program's simple, low-cost system of verifying land use was based on aerial photo interpretation.

For a cost of about $75,000, the program protected 6,538 acres of wetlands, 15,116 acres of land under conservation tillage, and 39,334 acres of tame forage, native prairie and riparian zones—about 30 percent of the land in the two rural municipalities. The average tax credit payout was $261, with individual farmers receiving between $1 and $1,628. In a mail survey, 86 percent of the participants agreed the program was worthwhile and 88 percent agreed that the property tax credit was effective compensation. This type of program is simple to administer and could be used in a variety of settings, including private forest areas.[1]

[1] Nancy Olewiler, "Property Tax Credits for Conservation," paper prepared for the National Round Table on the Environment and the Economy Ecological Fiscal Reform Program, September 2001.



4.4 SUMMARY

Progress in securing our natural capital has been slow. However, innovative models are emerging that can point the way forward for decision makers at all levels.

Best practices recently occurring in Canada are characterized by several important features. First, they focus on results, recognizing that a diversity of approaches can be used to achieve agreed-to goals and that innovative solutions emerge where there is a willingness to entertain such solutions. Second, they foster strong partnerships among a variety of groups, including those that have traditionally been adversaries. Lastly, they recognize the importance of proactive, large-scale planning as one of the key tools to achieving meaningful results on the ground.

However, innovative models are not enough. Several significant barriers to conservation must be addressed before Canada can position itself as a global leader in nature conservation. The following chapter outlines some key barriers to conservation in Canada.

Key Barriers to Progress

The absence of a new national framework or vision for conservation in Canada that responds to the changing context for conservation threatens to compromise future attempts to maintain our natural systems.

Chapter 5

Previous chapters have shown that nature conservation in Canada has not been advancing as quickly as it could and that governments have made many commitments that remain unimplemented. The Round Table has sought to understand why this is the case, and to identify the main systemic barriers to more and better conservation in Canada. This chapter provides an overview of these key barriers.

5.1 LACK OF POLITICAL WILL AND ACCOUNTABILITY BY GOVERNMENTS

First and foremost, the Round Table points to a lack of political will as a key barrier to nature conservation in Canada. Conservation goals have not been given sufficiently high priority relative to other government priorities, nor have they been effectively integrated into the overall agendas of most Canadian governments. Rather, conservation commitments and programs are often in competition with the priorities of other government departments.

There is a lack of a national vision for conservation in Canada, which could be a powerful mechanism for integrating and coordinating the actions of governments at all levels. Such a vision has been effective in the past; a number of conservation initiatives over the past 10 years took place in the context of the NGO-led Endangered Spaces program (1989–2000). The absence of a new national framework or vision for conservation in Canada that responds to the changing context for conservation threatens to compromise future attempts to maintain our natural systems.

This problem is also exacerbated by the relative lack of measurable commitments and time frames for action by federal, provincial and territorial governments. The Canadian Biodiversity Strategy sets strategic directions but contains almost no measurable commitments with specific time frames. The Commissioner of the Environment and Sustainable Development has been highly critical of the lack of measurable results, performance indicators and time frames for action at the federal level to implement the Convention on Biological Diversity.

5.2 LACK OF CONSERVATION PLANNING AT A LANDSCAPE LEVEL

The Round Table also notes that integrated approaches to establishing and coordinating conservation goals, priorities and efforts are rare. Despite federal–provincial cooperation on initiatives such as the North American Waterfowl Management Plan and the Great Lakes and Fraser Basin action plans, governments have not systematically pursued conservation plans for broad landscapes, coastal zones or regions.

This has led to disagreement on conservation priorities both among government departments with mandates affecting the same lands and among players such as industry, NGOs and communities. As a result, conservation efforts are often less targeted and effective than they might otherwise be—a key barrier, given the limited funds and time available for conservation.

5.3 KEY STEWARDS ARE OFTEN NOT "AT THE TABLE"

While governments have an important role to play in making land-use decisions and setting the rules for appropriate management, others—including industry, Aboriginal peoples, local communities and NGOs—are equally important stewards of Canada's lands and waters. However, these players have not always been systematically or effectively engaged in conservation planning over the last 10 years.

Despite the fact that conservation solutions such as protected areas will survive only if they are seen to be of value to Aboriginal communities,[53] many conservation initiatives in the past have not respected Aboriginal rights or allowed for the full participation

of these communities in the co-management of resources. Other local communities also feel isolated from conservation decisions. This is becoming an increasingly significant barrier, particularly as experience and science both dictate the need for more holistic approaches.

5.4 LACK OF ECONOMIC BENEFITS AND INCENTIVES FOR KEY STEWARDS

Across the country, communities have long struggled to balance the need for healthy natural ecosystems with the need to prosper economically. Rural, remote and resource communities in particular have often seen conservation initiatives as running counter to their interests. In the struggle to improve their members' social and economic quality of life, these communities may see nature conservation as an impediment to resource development that brings concrete economic benefits.

The Round Table has identified the lack of economic and financial benefits as an important barrier to conservation. For communities to become meaningful partners in conservation, they must be supported by both economic and financial benefits that enable conservation to benefit both nature and communities.

5.5 LACK OF INFORMATION AND TOOLS TO SUPPORT DECISION MAKING

Another key barrier encountered by the Round Table is the lack of information and technical resources to support good conservation planning, including scientific information (such as mapping and inventories) and training resources to ensure that all players have the capacity to participate effectively in decision making.

This conclusion is supported by the findings of the Canadian Information System for the Environment (CISE) initiative, which identified in its 2001 report "significant gaps in the data and information required to identify threats to biodiversity and to manage biological resources."[54] The report recommended that the Minister of the Environment make it an urgent priority to establish projects to improve data quality, integration and reporting in three areas, including biodiversity.

Additional information gaps identified by the Round Table include the fact that traditional and local ecological knowledge is not yet routinely factored into decision making. In addition, very limited information is generally available about the economic costs and benefits of conservation options. This has made it difficult to make informed trade-offs or to ascertain whether conservation initiatives have had a positive or negative impact on the development projects of local economies. Understanding of cumulative environmental effects is also relatively weak at present.

5.6 FAILURE TO INTEGRATE THE TRUE COSTS AND BENEFITS OF NATURE

A key barrier to conservation in Canada is our failure to integrate the true costs and benefits of our uses of and dependence on nature into decision making at all levels. In essence, under our current decision-making frameworks, it costs money to build a water filtration plant, but not to access clean water from natural sources, at least until those natural sources are in crisis.

That much of our natural capital—from water to trees to oil and gas deposits—is available to the public and to industry at little or no cost has led to a perception that conservation is bad for jobs and bad for the economy. Despite growing evidence to the contrary, this has been a key barrier to conservation, as it has led many companies and communities to oppose the establishment of protected areas and other conservation initiatives in the past.

At present, we understand neither the true value of our ecosystem services, nor what it would cost to replace them. What we do know, however, is that not understanding these costs and benefits is compromising our ability to make meaningful decisions about the balance between nature conservation and industrial development. While it is difficult to measure and place a value on the ecological services that nature provides, better understanding and quantification of these forms of natural capital will be critical to our ability to manage change over the long term.

5.7 LACK OF FINANCIAL RESOURCES TO SUPPORT CONSERVATION AND PARTNERSHIPS

Finally, despite the range of conservation initiatives across the country, the resources dedicated to conservation are clearly insufficient. At all levels of government, financial resources have decreased while demands have increased. Parks Canada, for example, experienced a 25-percent decrease in budget allocations between fiscal years 1994–1995 and 1999–2000. Prior to that, spending power had decreased a total of 19 percent since 1983. This is consistent with trends in public spending on nature conservation and environmental protection in Canada, where governments are falling steadily behind other nations, including the United States, in investing in natural capital.[55]

5.8 SUMMARY

Key barriers as outlined above pose a significant challenge to our ability to move forward with renewed energy to maintain the natural systems on which our communities and economy depend. The following chapters examine how to address these barriers within the context of four specific areas: conservation planning for whole landscapes, partnerships with industry on working landscapes, community stewardship and marine ecosystems.

These areas have been chosen for a variety of reasons. For example, the North and marine ecosystems represent both key conservation opportunities and ecosystems where the federal government has significant jurisdiction. The Round Table also wished to examine how best to strengthen communities and industry as increasingly important stewards of nature in Canada. Each of these chapters therefore presents important opportunities to advance conservation and accelerate the implementation of the new vision outlined earlier.

Chapter 6

Conservation Planning for Whole Landscapes

Protected areas are important anchors in any conservation system.

Chapter 6

Protected areas are important anchors in any conservation system. At the same time, the long-term health of these areas depends in large measure on the health of the lands around them. Conservation planning therefore needs to take whole landscapes into account to ensure that our natural capital is secured over the long term.

INTEGRATED planning can lead to solutions that maintain and balance ecological, social and economic objectives.[56] Planning does not have to be an expensive and time-consuming exercise; rather, it can be an effective upfront investment that leads to considerable savings. By proactively involving industry, Aboriginal communities and NGOs in planning, governments can largely avoid future conflicts on the landscape.

Opportunities to engage in such planning vary across the country. For example, there is significantly more potential for integrated planning, and for the establishment of new protected areas, in northern Canada, as this region is largely intact and not allocated for major industrial development. As a country with so much nature still in a wild state, we have a special opportunity to make proactive planning decisions with respect to these lands.

This chapter explores some of the biggest challenges to conservation planning and presents recommendations to support better conservation planning in Canada, with a focus on adopting whole-landscape approaches to planning in Canada's North.

6.1 KEY CHALLENGES

The central barrier identified by the Round Table is that *conservation planning has not kept pace with other pressures on the landscape.* Decisions about industrial development are being made more rapidly and in advance of conservation planning across the country, from northern landscapes to urban fringes.

Part of the problem is the *lack of coordination, integration and accountability for meeting conservation goals across government departments.* The departments that make conservation decisions are often not those responsible for approving industrial development or resource allocation, and there may be little communication between them. In addition, many departments responsible for conservation face shrinking budgets, which hinders their ability to plan proactively.

Conservation efforts have been most effective when a strong champion for conservation (such as former premiers Mike Harcourt in British Columbia and Gary Filmon in Manitoba) has set a clear agenda with specific time frames. The lack of such high-level political commitments across the country is a significant barrier to integrated conservation planning.

Lack of progress in achieving conservation goals may also stem from the fact that *governments at all levels are not working together to set conservation goals and priorities.* Given that jurisdiction for biodiversity conservation is shared between federal, provincial and territorial governments, joint planning and priority setting are critical. While there are several mechanisms for federal-provincial cooperation on conservation, there is relatively little infrastructure in place for these governments to jointly set goals, take action and monitor progress.

Another challenge is that conservation initiatives have often failed to include local and Aboriginal communities from the ground up. As such, the needs of local and Aboriginal communities have often been ignored. Governments set aside land for many of Canada's first parks and prohibited traditional Aboriginal activities on this land with little or no notice and without consulting the communities that

were affected. In addition, local and Aboriginal communities near protected areas have often not benefited sufficiently from them in terms of either direct jobs or indirect economic benefits. As a result, these *communities often feel that they are being asked to pay the price for conservation without receiving any of the benefits.* This has led many rural communities to resist the establishment of new protected areas.

6.2 RECOMMENDATIONS

There are clear opportunities in Canada to move faster in conserving our natural heritage. Canada has perhaps the single greatest opportunity in the world to get "ahead of the curve" and make conservation decisions in advance of major industrial developments, particularly in the North. Governments can take the lead by adopting the following sequenced recommendations.

Accelerate planning in priority areas

As an immediate first step, the Round Table strongly recommends that governments initiate integrated planning in several places offering unique and time-limited opportunities to plan proactively in advance of major industrial development. These places include the following parts of the country, in which few or no industrial allocations are in place.

The Mackenzie Valley: Canada's Mackenzie Valley holds a unique place in Canada's history. Twenty-five years ago, Justice Thomas Berger led Canada's largest-ever Royal Commission into this northern "frontier," determining that the great pristine river valley was a "northern homeland" for both indigenous people and wildlife. Justice Berger recommended that a major pipeline should not be approved in this area until several conditions had been met. These conditions remain relevant today, as they include the settlement of land claims, "adequate planning for all northern conservation areas before proposals for new large-scale frontier projects are advanced," and "withdrawals of land from any industrial use ... to preserve wilderness, wildlife species, and critical habitat."[57]

Although progress has been made in this region with respect to land claims settlements over the past 20 years, conservation planning has lagged significantly behind. Of the 12 natural regions that would be directly affected by a northern pipeline, for example, none is adequately, moderately or even partially represented in protected areas.[58]

The Mackenzie Valley offers an exceptional opportunity to plan for conservation in advance of major industrial development. This approach has been endorsed by a number of local Aboriginal peoples, agencies and officials. In October 2002, the Northwest Territory's Protected Areas Implementation Advisory Committee, whose diverse members represent everyone from local Aboriginal peoples to the Canadian Association of Petroleum Producers, voiced unanimous support for this approach.

Boreal forests: Canada's boreal forests—one of the largest contiguous wilderness areas left on Earth—are attracting national and international attention. A 1997 assessment by the World Resources Institute, for example, noted that Canada now contains 25 percent of the world's frontier or intact forests.[59] A recent report by the United Nations Environment Programme reiterated the importance of these forests to the world, and called Canada the most important G8 country for forest conservation.[60]

Canada's boreal forests provide a host of ecosystem services for Canadians and the world: they are the largest water filters on the planet and help regulate the earth's climate by storing close to 25 percent of total carbon stored in vegetation and soils on Earth.[61] They are home to roughly one third of the continent's migratory birds, as well as 40 percent of its waterfowl. Canada's forests are also some of the last remaining wild areas where intact natural systems function without human intervention; almost 70 percent of Canada's boreal region consists of intact, connected expanses of forests and wetlands.

"Conservation is itself an important land use and areas should be identified and set aside while the options are still open."

—Justice Thomas Berger

This means that globally unsurpassed opportunities still exist to protect intact wild areas within Canada's boreal forests. However, pressures on these areas are growing rapidly as industrial development moves northward and many provinces consider development proposals for these resources. To secure this natural capital for future generations, we need to immediately adopt new approaches to managing the boreal forest.

With constitutional authority north of the 60th parallel and fiduciary responsibility for Aboriginal communities within this region, the federal government should, in cooperation with other levels of government, lead the development and implementation of a plan or framework for the conservation and sustainable development of these lands in perpetuity.

Recommendation 1: The Round Table recommends that the federal government accelerate conservation planning in two areas where unique opportunities exist to plan in advance of major industrial development. These areas are:

- the Mackenzie Valley, where the federal government should require conservation planning prior to issuing permits; and
- Canada's boreal forests, where the federal government can work with provinces, territories and Aboriginal governments to develop a framework—which includes both protected areas and sustainable management—to sustain and conserve Canada's boreal forests.

Making progress in conserving these two ecosystems over the next five years will be a significant contribution to securing Canada's natural capital. This targeted approach will enable the federal government to focus its resources strategically on those areas with the greatest conservation potential and where it has significant authority, while working in partnership with other levels of government, industry, Aboriginal peoples and local communities.

Require integrated land-use planning to ensure that conservation and development decisions are made in proper sequence

Across the country, industrial development decisions are proceeding ahead of conservation planning. In some cases, industry can and does support conservation planning in advance of development; however, these instances are too few, limiting our long-term options to secure Canada's natural capital.

To address this problem, the Round Table believes that *governments should immediately commit to making conservation decisions at the same time as or prior to decisions about industrial development,* to ensure that decision making takes into account both natural and other forms of capital. In cases where work on conserving natural capital has been effective, much of the credit is due to federal, provincial and territorial governments, which have recognized and assisted in such processes.

Recommendation 2: The Round Table recommends that federal, provincial, territorial and Aboriginal governments require integrated land-use planning to ensure that conservation decisions are made at the same time as or prior to decisions about major industrial development.

Two important mechanisms for implementing this recommendation are environmental assessment requirements and land-use planning. Environmental assessment regimes are largely project-based (i.e. apply to potential new industrial development projects), whereas land-use planning enables decision makers to plan for a mix of land uses within a larger geographic area. All provinces and territories have legislative and policy frameworks to enable them to use these tools, as does the federal government; however, the federal role in land-use planning is largely confined to federal lands, many of which are north of the 60th paralliel.

Although new projects are generally required to undergo some form of environmental assessment as a part of the regulatory approvals process, land-use planning is not required on all public lands. In addition, neither environmental assessments nor land-use planning—at the provincial or federal levels—routinely require consideration of biodiversity values or conservation planning.[62] As a result, the conservation of natural capital is not consistently incorporated into regulatory decisions across the country.

A powerful mechanism for effective conservation planning would thus contain two elements: one, incorporate ecological values into environmental assessments and land-use planning at all levels and, two, require completed conservation and land-use plans before major new industrial developments are approved.

At the federal level, this would mean ensuring that Canada's national and international commitments and objectives relating to biodiversity and nature conservation are addressed in environmental assessments conducted under the Canadian Environmental Assessment Act, and are taken into account when determining the significance of the adverse environmental effects of development projects.

Federal and provincial agencies could also require that the terms of major regulatory approvals—such as oil or gas pipeline construction licences granted by the National Energy Board, or new provincial timber harvesting allocations—include the completion of conservation and land-use plans. If this were the case, the construction of pipelines such as the Mackenzie Valley or Alaska Highway pipelines would proceed only after land-use planning had been completed and networks of protected areas had been designed and set aside.

Recommendation 3: The Round Table recommends that federal and provincial governments require satisfactory completion of conservation and land-use plans for major regulatory approvals such as oil or gas pipeline construction licences. At the federal level, such approvals would include permits issued by agencies such as the National Energy Board and offshore oil and gas boards.

State of the debate: conservation planning in advance of development

Like the issue of connectivity through wildlife corridors, the notion of conservation planning in advance of development revealed another important area of continuing debate.

Participants in the Conservation of Natural Heritage Program agreed that it was important to have certainty on the landscape. When all key stakeholders are at the table, ready to make meaningful trade-offs and have a common understanding of where development will or will not take place, planning becomes an important tool for conservation. However, views on how to achieve this goal sometimes differed.

Some participants in the program felt that it was crucial to have a system of protected areas in place, and thus ensure ecological integrity across whole landscapes, before opportunities to establish such a system are lost through development pressures. However, other participants felt that there should be no stop to development until the needs of communities are taken into account. Some participants also noted that opportunities for industry activity on the landscape or seascape should not be entirely compromised by the establishment of protected areas.

In their discussions, participants generally supported the need for conservation planning to take place at the same time as development planning. All participants conceded that this approach can address the needs of industry and communities, as well as the ecological integrity of land and seas.

Adopt best practices in land-use planning

Land-use planning processes and requirements are in place in all jurisdictions across the country. However, while there is a federal-provincial committee on land-use planning, there is no consistent approach to land-use planning across the country.

The Round Table's research and case studies suggest that effective planning processes are those that have clear, consistent terms of reference and that bring all interests and all potential land users to the table at the same time. Such processes have been used to great effect in British Columbia, where the Land and Resource Management Planning (LRMP) process has successfully allocated lands to both conservation and industrial development, while also attempting to address Aboriginal rights and title and the concerns of local communities.

The Round Table believes that best practices should be used in the design and implementation of land-use planning. A checklist has been provided (see box on page 56) to help design these exercises so that they incorporate social, ecological and economic perspectives.

Expand the conservation network

National wildlife areas (NWAs) and migratory bird sanctuaries (MBSs) are underused federal tools for conservation, particularly in the North. Environment Canada manages a network of 49 NWAs covering almost 500,000 hectares of land and water and, in cooperation with the provinces and territories, 98 MBSs encompassing more than 11 million hectares.[63] These designations complement other federal and provincial protected areas, but they have seldom been implemented in Canada's northern ecosystems.

NWAs and MBSs are often particularly attractive to northern communities, as they do not generally exclude traditional activities such as hunting and trapping. A growing number of proposals for NWAs are being developed through such processes as the Northwest Territories Protected Areas Strategy, in which communities develop and propose conservation solutions that meet their own needs and interests.

NWAs and MBSs could be used to protect important wildlife habitat across the boreal, taiga and Arctic regions, but only if Environment Canada has the capacity to expand the network of NWAs and MBSs. The Round Table therefore recommends that the federal government allocate new funds to Environment Canada for this purpose (see Chapter 10).

Forge stronger partnerships with Aboriginal peoples

For conservation to move forward, governments need to find new ways to partner with and enhance benefits for Aboriginal communities when establishing new protected areas. One such mechanism is the cooperative agreement, which can guarantee economic benefits to Aboriginal communities by requiring that a percentage of park staff be employed from within the community. The cooperative agreement can also guarantee business development opportunities.

The Gwaii Haanas National Park Reserve/Heritage Site offers one example of benefit sharing. As part of efforts to establish the park, the governments of Canada and British Columbia provided $126 million to compensate logging companies and forestry workers, invest in more extensive silvicultural operations outside the park, fund the startup of the park reserve/heritage site itself, and establish a regional economic diversification program and trust fund.

A 1995 study of the economic impacts of the park reserve found that the logging jobs that were lost have been replaced by new jobs in silviculture, tourism and protected areas management, a trend that was predicted to continue under the remaining spending

provisions of the agreement. Approximately 50 percent of the park reserve staff are Haida, who were recruited through Parks Canada training and development programs.

This new kind of partnership can also be seen in the North. Several new national parks in the Arctic have been accompanied by detailed park benefit agreements negotiated between Parks Canada and Aboriginal peoples, particularly the Inuvialuit. These agreements seek to ensure that Aboriginal peoples will benefit economically and culturally from parks created in their settlement areas. Some of the mechanisms used by these agreements are:

- locating park offices in local communities;
- setting hiring policies that give preference to local Aboriginal people;
- jointly preparing economic development or community development plans for communities around the park; and
- giving Aboriginal-controlled businesses the first opportunity to take on park contracts or to establish park-based businesses.

These efforts are consistent with the recommendations of the Royal Commission on Aboriginal Peoples, which called on governments to:

- increase their allocation of tourist outfitters' licences or leases to Aboriginal peoples by
  - granting exclusive allocations in certain geographical areas (as Ontario now does north of the 50th parallel),
  - offering new licences to Aboriginal peoples before any other applicants, and
  - giving Aboriginal peoples the right of first refusal on licences or leases that are being given up; and
- encourage Aboriginal peoples to develop outfitting businesses based on their cultural values.

Recommendation 4: **The Round Table recommends that all governments enhance the benefits of conservation for Aboriginal communities, both through the parks establishment process and by providing Aboriginal peoples with support for or preferential access to the development of businesses built around conservation areas in their traditional territories.**

An essential part of this process is the direct involvement of Aboriginal communities in determining what benefits should be realized and how Aboriginal peoples can both contribute to and benefit from initiatives such as parks establishment.

An example of an existing federal program that could support these efforts is Aboriginal Business Canada (ABC). ABC is an Industry Canada program that promotes the growth of commerce as a way to achieve economic self-sufficiency for all Aboriginal people. For eligible applicants, it provides financial assistance, information, resource materials and referrals to other sources of financing or business support.[64]

Support Aboriginal communities in land-use planning

Many Aboriginal communities have begun to map aspects of their cultures and traditional ecological knowledge. Maps of traditional land use and occupancy can be used to settle land claims, negotiate co-management agreements and provide much-needed baseline data for long-term community and resource planning. They can also increase a community's awareness of its connections to its territory and help recapture the history and stories of a people.

These maps usually include places where animals and plants have been harvested, as well as knowledge about the habitats and sites critical to the survival of key animals, settlements, travel routes and sacred sites. Although many Aboriginal communities do not want

this information to become publicly available, they often use it in the identification of protected areas. Such information has played a role in the Northwest Territories Protected Areas Strategy and land claims such as the Sahtu Dene settlement in the Northwest Territories.

There is no standard approach within the federal, provincial or territorial governments to supporting studies of traditional ecological knowledge or land use, nor are there programs that help communities integrate this knowledge into conservation planning. Such studies are supported on a case-by-case basis through land claims agreements, land-use planning, co-management boards and protected areas strategies. A central fund to support these studies would ensure that more Aboriginal communities have the information they need to participate effectively in conservation and land-use planning.

Recommendation 5: The Round Table recommends that all governments support traditional land-use studies for Aboriginal communities. This support would allow Aboriginal communities to enhance community capacity, access local knowledge and develop information systems to effectively manage and utilize that knowledge. It would also enable Aboriginal communities to effectively engage in land-use planning and management decisions.

Gather and share information

A strong, nationally consistent conservation knowledge base is critical to Canada's ability to design and achieve a comprehensive new vision for nature conservation. Such knowledge is a building block of conservation, since "you cannot manage what you cannot measure."

A robust information base is needed in both the immediate and long term to identify, predict and manage existing and emerging challenges to the conservation of nature. Immediate investments are therefore required in order to build that base, which would include the elements below. Many of the following initiatives are either currently underway, or are being developed to contribute to the broader information base:

a. *A national electronic biodiversity information network.* There is a need for a variety of initiatives, outlined below, to help generate nationally consistent data to support conservation planning, species at risk recovery and environmental assessments across the country. However, a critical component of a successful, comprehensive conservation information base is for the information to be accessible to all decision makers and interested members of the public. A national electronic biodiversity information network would help ensure the collection, analysis and dissemination of biological data on species and habitat important to Canadians.

   In April 2003, the federal government's Inter-departmental Assistant Deputy Minister's Nature Table endorsed the agreement of a number of stakeholders in the biodiversity information community to house the country's biodiversity knowledge and innovation network under the Canadian Information System for the Environment (CISE). As a first step, this federal biodiversity information partnership will coordinate federal activities in fiscal year 2003–04. Working through provincial Conservation Data Centres, the Miistakis Institute and other partners, this partnership aims to expand in 2004 to become a coordinating centre for the country to support the information-related activities outlined in this section.[65]

   Estimated Cost: One million per yr for three years to the proposed Canadian Institute for Environmental Information to synthesize protected area, species and habitat information in support of a range of conservation decisions.

b. *A standard national classification of both terrestrial and aquatic biological communities (which would allow for broad assessment of habitat change and identification of national-level conservation priorities).* The Canadian Forest Service, NatureServe (in Canada and the United States), Parks Canada and some provincial conservation data centres are cooperating in an effort to develop a Canadian National Vegetation Classification. This classification is a critical component of biodiversity information.

   Estimated cost: $1 million over three years to key departments such as Natural Resources Canada and Environment Canada to accelerate the completion of a standard national classification system.

c. *A national land-cover monitoring program.* Although a number of departments and jurisdictions have been collecting some information about land cover, there is no national land-cover monitoring program. The Canadian Land Cover Initiative (CLCI), which involves Natural Resources Canada (Canadian Forest Service) and the Ontario Ministry of Natural Resources, is developing terms of reference for such an effort. The CLCI will require two components: development of standard protocols and mapping through the use of satellite imagery. The need for a national land-cover monitoring program, as part of the System of National Accounts, is supported by the findings of the Round Table's Environment and Sustainable Development Indicators (ESDI) Initiative.[66]

   Estimated cost: $200,000 to key departments to begin developing a national, coordinated land-cover monitoring program.

d. *A national gap analysis program.* Gap analysis uses GIS—or geographic information systems—to map wildlife habitat and predict the distribution of key species. This information can then be used to identify "gaps" in biodiversity protection that need to be filled by the establishment of new reserves or changes in land-use practices. Once overlain by industrial allocations and other land uses, maps produced through gap analysis can help landowners and users agree on one map of conservation priorities for a given landscape based on shared data and information. Such agreement was critical to the success of Ontario's Lands for Life process, as it provided a tangible focus for negotiations and conservation planning. This gap analysis program would depend on information from the Canadian National Vegetation Classification discussed above.

A national gap analysis program has been used to great effect in the United States, where it has helped catalyze the establishment of conservation networks and cooperation among various agencies. Establishing such a program in Canada—which currently has no similar program or set of protocols—would create the basis for long-term scientific cooperation in support of conservation planning.

Estimated cost: $10 million annually to Environment Canada, Natural Resources Canada and other partner organizations to begin the process of creating a national gap analysis program in Canada.

e. *A publicly accessible digital map and database of all conservation areas in Canada (and their level of protection).* This would draw on work done by Natural Resources Canada, Environment Canada and the Canadian Council on Ecological Areas to develop the Canadian Conservation Areas Database (CCAD). Considerable work remains to be done to transform CCAD into a fully accessible digital database accessible to the public through the GeoAccess Division of Natural Resources Canada's National Atlas of Canada Web site.

Estimated cost: $300,000 and three full-time equivalents over three years to Natural Resources Canada to transform CCAD into a fully accessible database.

f. A nationally coordinated community monitoring network. In 2002–2003 a prototype community-monitoring network was launched by Environment Canada and the Canadian Nature Federation with Voluntary Sector Initiative funds. Over one hundred and twenty communities applied to participate, which demonstrated a remarkable show of interest in sharing community-based knowledge on the environment. Although successful, the program cannot continue without sustained funding. If funded and expanded, such a network would enable multiple community stakeholders to pool complementary skills, roles and resources in an effort to collect information, monitor trends and respond effectively to local environmental issues that are directly linked to policy and decision making. When communities experience multistakeholder success, the benefits can be multiplied by sharing their approach with other communities participating in the network.

Recommendation 6: The Round Table recommends that the federal government support efforts to provide the nationally consistent information needed to plan effectively for conservation across the country. Support would include:

- a national electronic biodiversity information network;
- a standard national classification of both terrestrial and aquatic biological communities;
- a national land-cover monitoring program;
- a national gap analysis program;
- a publicly accessible digital map and database of all conservation areas in Canada; and
- a nationally coordinated community monitoring network to provide for the specific needs of local and regional stakeholders.

Value natural capital and integrate these values into decision making

There is clearly a growing need to integrate ecological and economic factors into decision making. This is challenging in part because of the difficulties in determining the value of natural capital.

The Round Table's ESDI Initiative resulted in two recommendations that address this issue. These were to report on five national indicators of natural capital and, in the long term, create new natural capital accounts within the existing System of National Accounts (SNA).[67] Both measures would highlight the critical contribution that natural capital makes to national wealth. Although the current state of information precluded inclusion of a national indicator of biodiversity in its recommended set of indicators, the ESDI Initiative's work on natural capital indicators has underscored the importance of developing such an indicator. The Round Table supports efforts to develop a biodiversity indicator that reflects the general health of "eco-units" in a given province or area, based on a number of key sub-indicators such as those for species, habitat and threats. The indicator would provide a useful starting point for determining the value of natural capital and measuring changes that are particularly relevant to the conservation of nature.

The SNA is currently the basis for many powerful economic indicators such as the GDP. Creating new accounts that track the stocks and flows of different types of natural capital within the SNA would enable the linkage of economic and environmental data, helping to integrate issues of natural capital into economic analysis and policy making. These new accounts would be coordinated by Statistics Canada but would require the cooperation of many other departments including Environment Canada. In particular, Environment Canada's Canadian Information System for the Environment would be critical to the creation of these natural capital accounts.

Significant work is still needed to establish the best way to value natural capital and incorporate these values into economic and environmental decision making through ecological fiscal reform and related measures. This difficult task would require collaboration among a broad range of academics,

conservation experts and policy makers from across the country. While this issue is currently being examined by several departments (notably Environment Canada and Statistics Canada), the Round Table also recommends that it be pursued within the context of the proposed nature and society research program of the Social Sciences and Humanities Research Council.

Recommendation 7: The Round Table recommends that the federal government continue to support the work of Statistics Canada in developing a system of national accounts and to support the development of CISE. The Round Table also recommends that the nature and society research program currently being considered by the Social Sciences and Humanities Research Council establish, as a priority, research to determine the best way to value Canada's natural capital and to factor these values into decision making by all levels of government.

INTEGRATED LAND-USE PLANNING: CHECKLIST OF BEST PRACTICES

1. Integrated approach to planning
- Are all known and new industrial allocations on the table at the same time?
- Are there voluntary mechanisms available that enable industry, Aboriginal peoples, local communities and interested conservation voices to collaborate on conservation initiatives?
- Is there agreement that no new significant development approvals will be given while planning is underway?
- Is the planning area appropriate? Does it follow ecological boundaries? Is it big enough to allow for trade-offs and small enough to allow all relevant players to be engaged?

2. Engagement of all players
- Are all industrial players at the table?
- Are First Nations and other Aboriginal communities at the table?
- Are local communities at the table?
- Are all interested conservation voices at the table?

3. Clear goals and terms of reference
- Has the government established clear policy goals and terms of reference? Have participants agreed to these goals?
- Is there a commitment to both conservation goals and economic goals within the context of the planning process?
- Is there a clear understanding on the part of all participants about the expected results and the consequences of not reaching consensus?
- Is the government involved, as either a participant or an observer?
- Has the government agreed to implement consensus results?

4. Knowledge base for decision making
- Is there access to reliable information about the ecological and economic values of the area?
- Does the planning table have GIS-mapping capacity?
- Is traditional and local knowledge being used where possible?
- Does the table have access to information about innovative tools that have been used elsewhere?

5. Resources
- Does the table have adequate resources?
- Does it have access to independent facilitation where needed?
- Are capacity and decision-making supports (e.g. training, resource materials) available to those who require them?
- Do participants have adequate time to pursue consensus?

6. Supportive measures
- Can the participants propose new tools to respond to specific barriers (e.g. measures to offset resources lost in the creation of protected areas)?
- Do they have the information and/or resources to do this effectively?

7. Institutional arrangements
- Do all participants understand who is accountable for implementing the plan?
- Is there a commitment to creating institutional arrangements (e.g. advisory board, five-year review) to ensure the long-term sustainability of the plan?
- How will all sectors be involved? To whom are they accountable (individually, to each other)?

Chapter 7

Working with Industry to Promote Whole-Landscape Approaches

Evidence suggests that to sustain ecological services we need to promote conservation across whole landscapes, including public lands that are subject to resource development or industrial management.

Chapter 7

Scientific evidence suggests that to sustain ecological services we need to promote conservation across whole landscapes, including public lands that are subject to resource development or industrial management.

THIS whole-landscape approach requires new conservation partnerships with resource companies, many of which are seeking new ways to act as stewards of nature. In fact, many companies are advancing conservation faster than are governments. In some cases, companies are driven to go beyond their regulatory requirements by public pressure or controversy over particular products or areas of operation. In other instances, companies have adopted conservation measures to make their operations more efficient and therefore cost-effective. And some companies are motivated to launch significant conservation initiatives that position them as leaders in an increasingly global market for goods produced in an environmentally responsible manner.

Companies can use various tools to maintain ecological integrity. They can agree to set aside or protect areas of high conservation value (such as key wildlife habitat) or adopt new operating practices that minimize their ecological impact. They can also seek ways to use natural resources more efficiently—in essence, to do more with less. This approach often requires significant technological innovation and in some cases may involve switching to new materials, such as agricultural waste or recycled fibre instead of virgin pulp in paper production. Companies can also restore areas that have been fragmented or disturbed as a result of industrial activity.

In some cases, individual companies or industrial sectors may simply choose to adopt certain measures within their own operations. In other cases, however, governments must implement or foster the adoption of conservation solutions, for example, by creating agreed-to protected areas, providing incentives or removing policy barriers. Some of these actions can mitigate or offset any negative impacts (e.g. reductions in resource supply) associated with voluntary conservation activities.

To a large extent, provincial governments have the necessary legislative and policy tools to implement and encourage conservation solutions by resource companies. However, these regulatory and policy frameworks vary significantly from jurisdiction to jurisdiction. Instead of identifying specific legal and policy barriers or designing specific measures that provincial governments could adopt—a task that was beyond the scope of the Round Table's mandate—this chapter suggests several overall directions and areas where further work could be done to support greater corporate stewardship.

This chapter focuses primarily on opportunities to promote stewardship in the forestry and mining sectors. However, sectors such as oil and gas and hydroelectricity also depend on Canada's natural capital and thus have equally important roles to play in designing and implementing conservation solutions. More work in this area is required to determine how governments can best support these actions.

7.1 CURRENT INITIATIVES

Some of the most important conservation successes over the past five years have been initiated by companies. Goodwill on the part of these companies has led to significant conservation partnerships and achievements on the ground, including:

- joint identification by World Wildlife Fund Quebec and the Quebec Lumber Manufacturers Association of forests of high conservation value in the southern portion of Quebec's commercial forest (south of the 52nd parallel);

- the Manitoba Mining Initiative, which brings World Wildlife Fund Canada, the Canadian Nature Federation and the Mining Association of Manitoba together to identify candidate areas for protected status across the entire province in concert with the Parks Branch of Manitoba Conservation and the Geological Survey Branch of Manitoba Industry, Trade and Mines; and
- the Eastern Scotian Shelf Integrated Management (ESSIM) initiative, which brings together scientists, conservationists and key players from the fishing, oil and gas, and tourism sectors. A pilot project under the federal Oceans Act, ESSIM aims to develop a proactive framework for conservation, multiple use of oceans and sustainable development. Although it is at a much earlier stage than the initiatives above, it is nevertheless an important new approach to involving industry in the integrated management of marine ecosystems.

Partnerships such as these are beginning to identify innovative mechanisms to help companies adjust to a more conservation-based approach to the landscape. The Ontario Forest Accord, for example, proposed the use of mitigation measures (such as pre-commercial and commercial thinning; more effective harvesting of small-diameter wood; and salvage of timber damaged or killed by fire, insects or disease) to offset wood supply lost to the industry through the establishment of new protected areas.

All these mitigation measures required policy changes under existing provincial legislation. The Ontario Ministry of Natural Resources, for example, agreed to eliminate stumpage fees for treetops, which were previously left at the side of the road, in a bid to encourage timber companies to use them. This increased the volume of wood available to the industry with no new ecological impact.

In March 2002, the multistakeholder advisory board to the Ontario Forest Accord confirmed that the mitigation measures had succeeded in offsetting the wood supply lost through the establishment of protected areas throughout the province. This significant achievement proves that increased industrial efficiency can free up resources for conservation.[68]

GLOBAL MINING INITIATIVE

The Global Mining Initiative (GMI), launched in 1998, is led by 10 mining companies from around the world, including the Canadian firm Noranda.[1] It set out to redefine the role of the global mining industry in relation to sustainable development. In particular, it aimed to reach a clearer definition and understanding of the positive role the mining and minerals industry can play in making the transition to sustainable patterns of economic development.

Over the past three years, GMI has engaged more than 20 global companies in a search for more sustainable operating practices. This search has included assessing the impacts (positive and negative) of mining on economic prosperity, human well-being and ecosystem health, as well as developing guidelines for sustainability.

Current priorities include developing an industry-wide sustainable development charter; designing best-practice protocols that encourage public reporting and third-party verification; resolving questions of protected areas and mining; developing community sustainable development plans and tools at mine sites; and promoting the concept of integrated materials management, which encourages reuse and recycling.

[1] www.globalmining.com

7.2 KEY CHALLENGES

The emergence of industry as a major force in conservation is one of the most powerful trends and opportunities identified by the Round Table. At the same time, significantly more can and should be done on public lands subject to resource development to ensure that conservation values are maintained in the face of growing industrial pressures.

Although leading companies are increasingly willing to plan for conservation in areas under their management or use, most governments do not have the capacity or tools in place to respond effectively. In a number of cases, industry and conservation groups have developed solutions agreeable to both sides only to find that governments are either unable or unwilling to integrate these solutions into broader legislation or policy.

MINING ASSOCIATION OF CANADA AND THE CANADIAN NATURE FEDERATION: A COLLABORATIVE EFFORT

A recent study released by the Mining Association of Canada (MAC) and the Canadian Nature Federation (CNF) examines the extent and nature of mining activities and their impacts on Canada's national parks.[1] The report is an invaluable resource for MAC, CNF and the Parks Canada Agency, as it serves to enhance their collective understanding of the ecological risks associated with mining activities in the vicinity of protected areas. This work, which will guide future actions to mitigate the impacts of mining on national parks, represents an important partnership between CNF and MAC and demonstrates collaboration among the non-government, private and public sectors toward the common goal of enhancing the protection of our natural heritage.

[1] www.cnf.ca

For example, even though the Mining Association of Manitoba and World Wildlife Fund Canada jointly identified more than nine million acres of priority protected areas, none of these lands have been given formal legal protection by the Manitoba government. However, some interim protection has been established: no mineral exploration or development will take place in these areas, but they remain open to other industrial development such as potential hydroelectric development and logging pending full legal protection.

The Manitoba experience, as well as other related experiences, points to a number of structural barriers to conservation within policy and legislative frameworks across the country. One such barrier is the scope and nature of current tenure regimes. Industrial allocations are currently given for relatively long time frames and are generally made on a piecemeal, sector-by-sector basis in isolation from conservation or land-use planning. The lack of integrated planning is one of the most important structural barriers to conservation on allocated lands in Canada.

In some places, a lack of integrated planning has led to ongoing conflicts both within and between industrial sectors active on the same land base. Overlapping allocations (e.g. between two forest companies with tenure over different tree species, or between a forest company and an oil and gas company on the same land) can intensify pressure on the landscape and make it difficult for one company or sector to conserve parts of it. In one Alberta example, oil and gas companies were found to cut more trees than the forest company with tenure for the same area.

In recent years, better approaches to coordination and planning for these multiple industrial uses have emerged. However, for the most part, these approaches have not been effectively integrated into all stages of decision making, from planning to project review to approvals. This makes it extremely difficult to predict, manage and avoid the loss of biodiversity on these landscapes.[69]

Another difficulty is that leading companies in conservation still have only a limited ability to differentiate themselves in the market. Despite the emergence of third-party certification and related initiatives, the competitive edge gained from taking leadership in establishing protected areas and adopting best practices on the landscape is not yet significant.

Moreover, the companies that risk the most in demonstrating leadership may sometimes be subject to greater criticism than those that choose to wait at the back of the pack. Unlike its financial status, a company's social and environmental performance is neither reported nor generally reflected in the market. Companies that make an extra effort to internalize environmental costs may therefore fail to capture public recognition and financial rewards for doing so. This raises serious questions about the market links between environmental and economic performance. It also demonstrates a need to ensure that our economic and policy signals better integrate and reflect the value of natural capital.

An additional challenge is to get past the positioning, rhetoric and levels of distrust that have characterized exchanges between industry and conservation groups in the past and made it difficult for them to reach consensus on innovative new approaches. Overcoming this barrier will take leadership, trust and time.

INTEGRATED RESOURCE MANAGEMENT PLANNING

In response to concerns over growing conflicts on the landscape, industries in Alberta, led by the Chamber of Resources, have been exploring ways to better coordinate their activities and reduce their impact on the landscape. Already, two companies working on the same land base have found ways to save $1 million on road infrastructure alone. A key tool in achieving these results has been the ALCES (A Landscape Cumulative Effects Simulator) model, which helps industry and land managers identify, predict and address cumulative environmental effects.[1]

[1] www.acr-alberta.com/Projects/integrated_landscape_management.htm

7.3 RECOMMENDATION

Clearly, there are opportunities to engage companies active on public lands in new forms of conservation partnerships. Significant effort will be required, however, if these new partnerships are to go beyond current conservation initiatives.

Changing global markets are already driving new conservation partnerships and will continue to do so. Governments can play an important role by creating policy frameworks that support and encourage these market-driven partnerships.

Remove policy barriers to voluntary stewardship

Federal and provincial policy and legislative frameworks contain a number of structural barriers that impede conservation actions by industry, and a number of them could be immediately removed to further conservation.

Although one of the most powerful actions a company can take to maintain core habitats or habitat links is to voluntarily surrender its resource rights to particularly sensitive areas, most legislative and policy frameworks do not have provisions to effectively recognize this action. This is a serious impediment for any industrial sector wanting to become more engaged in conservation.

Some provinces (such as British Columbia and Saskatchewan) even have "use it or lose it" clauses that allow resources to be reallocated to other industrial players if they are not exploited within a certain period of time. This situation presents not only a significant barrier for companies that want to give up resources for conservation purposes, but also impedes good conservation planning by preventing areas from being set aside even for short periods while analysis, mapping and planning are underway.

Other policy changes that could be explored by provincial governments include allowing companies to exchange areas of high conservation value for those of equal resource value. Current regulatory regimes do not provide sufficient flexibility for forestry companies to make such swaps.

Recommendation 8: The Round Table recommends that federal, provincial and territorial governments examine their policy and legislative frameworks to identify and remove key policy barriers to voluntary stewardship by resource industries.

As a first step, provincial governments should:

- amend their legislation to enable the creation of interim protected areas pending completion of conservation planning; and
- remove "use it or lose it" requirements when resource rights are surrendered for conservation purposes.

This move would enable companies to voluntarily surrender areas of high conservation value with the certainty that they would not be penalized and that these areas would not be reallocated to other companies.

Policy barriers are also an issue for the mining sector. Some mining companies, for example, want to take part in efforts to manage abandoned mine sites, which have an accumulated liability of approximately $2 billion (excluding key sites such as the Giant Mine). Provincial governments could introduce "good Samaritan" provisions into their legislative frameworks to enable companies to help clean up mine sites for which they are not legally responsible without fear of becoming liable for these sites. This policy change would make a significant difference to the ecological integrity of affected areas.

In addition to eliminating specific barriers that have already been identified, federal, provincial and territorial governments all need to examine their policy and legislative frameworks to identify and remove all other barriers to conservation. The Round Table recommends that each government undertake this exercise as a priority, in conjunction with industry and conservation interests.

Engage companies and conservation interests in integrated land-use planning

Governments could also further conservation by engaging companies in integrated land-use planning. Land-use planning is a critical mechanism for bringing industry and conservation interests together to identify conservation priorities and solutions for entire landscapes. Governments have a vital role to play in designing and establishing these processes and in implementing their results.

Such planning can help reconcile competing demands on increasingly fragmented landscapes (e.g. when different companies or industrial sectors have been allocated resources in the same area). When combined with the use of innovative tracking tools such as the ALCES (A Landscape Cumulative Effects Simulator) model, integrated planning can significantly reduce companies' ecological footprints while identifying efficiencies (such as shared roads) that can save them time and money.

As outlined in Chapter 6, the Round Table recommends that federal and provincial governments require satisfactory land-use plans prior to issuing new licences for major industrial development, and that these governments work together with all interests to develop comprehensive approaches to conservation planning for all regions of the country.

Provide financial incentives to support corporate conservation leaders

A longer-term measure for furthering conservation is for governments to adopt incentives that recognize and encourage conservation actions by industry. Such incentives would vary by sector and need to be tailored to the opportunities in different landscapes.

Ecological fiscal reform (EFR) is one approach that could identify incentives to help support conservation actions by industry.[70] EFR could help us understand where spending and tax policy (and the incentives and disincentives created by them) put economic and conservation goals at cross-purposes. From there, we could begin to identify positive fiscal and economic measures that actually benefit conservation. Although the identification of a comprehensive suite of incentives through an EFR approach was beyond the scope of this report, the Round Table may delve more deeply into this area in future work.

Incentives can support enhanced resource efficiency and conservation in all industrial sectors. In the forestry sector, incentives could be targeted at improving wood utilization (e.g. using different species, sizes and ages), modifying harvesting practices (e.g. commercial thinning, partial harvesting and some intensive forestry techniques) and promoting the reforestation of private land. Incentives could also be provided to companies adopting measures that enhance the efficiency of their resource use, or those demonstrating innovation in value-added manufacturing.[71]

Tax incentives could also be used to encourage greater conservation leadership by industries. For example, within the mining sector, tax incentives could encourage contributions to a multistakeholder mine site restoration fund, provided that performance in restoring mine sites was independently verified by third parties.

It is critical that incentives be targeted and recognize only those efforts that go above and beyond business as usual. In other words, incentives should not simply support actions that would have happened anyway (e.g. in areas where there is limited resource potential or high conservation values). As such, in setting conservation priorities, governments should first distinguish between areas of low resource potential, which should not be the target of incentives, and other areas where incentives could be essential to conservation. This could also help governments identify those rare cases where compensation may be necessary to secure critical natural areas.

ONTARIO LIVING LEGACY TRUST

Ontario established the Living Legacy Trust Fund under the Forest Accord to directly support forest management improvements that would counterbalance supply reductions resulting from new protected areas. The $30-million fund is an important source of support for research, development and pilot testing of innovative approaches.[1]

[1] www.livinglegacytrust.org

Other incentives that federal and provincial governments could adopt include recognition programs, which could play a valuable role in identifying and promoting industrial leaders, as well as promoting best practices to other companies in the same sector. The Canadian Forest Stewardship Recognition Program, for example, aims to stimulate awareness of and appreciation for stewardship, sustainable practices and efforts to conserve biodiversity in Canada's forests. The program was developed by Wildlife Habitat Canada, the Canadian Pulp and Paper Association and the Canadian Forest Association, with the support of numerous national and provincial forestry and conservation organizations.

Governments can also encourage conservation by supporting research and development into process efficiency and other technological improvements that offset reductions in resource supplies. Federal or federally sponsored programs that could contribute to this research and development include research programs within the Canadian Forest Service, the Model Forest Network and the Sustainable Forest Management Network. These programs could be tasked with developing additional mitigation and offsetting measures for industry leaders over the next five years.

BRANDING AND CERTIFICATION

The "war in the woods" between forestry companies and environmental groups in British Columbia throughout the 1990s led to the recognition by industry that market pressures were driving companies to go beyond regulatory requirements and demonstrate new commitments to voluntary stewardship. One result of this change was forest certification, which for some B.C. companies has been part of efforts to convince consumers and activists in the United States and Europe that there has been a sea change in their management practices.

By committing to a certification scheme, a company agrees to have the sustainability of its day-to-day operations, as well as the success of its nature conservation initiatives, verified by an independent third party. Certification systems are currently being developed separately by the Canadian Standards Association, the Forest Stewardship Council (FSC) and the American Forest & Paper Association's Sustainable Forestry Initiative. Of these systems, the FSC's is considered the most demanding, in part because standards must be jointly developed and approved by four sectors or "chambers": economic, social, Aboriginal and environmental.

Regardless of which standard is adopted by individual companies, these certification schemes are sending strong signals to the market. What is now a voluntary commitment is likely to become an essential part of doing business. The Forest Products Association of Canada, for example, recently announced that its members must adopt some form of third-party certification by 2006.

Certification is proof of the powerful influence consumer choice can have on nature conservation. It is becoming part of the internalization of environmental costs, with benefits to companies that include risk reduction, growth of market share and, potentially, premium prices. The value of certification to nature is not yet clear, as only limited information on the impacts of certification is available in Canada and elsewhere.

Encourage market approaches

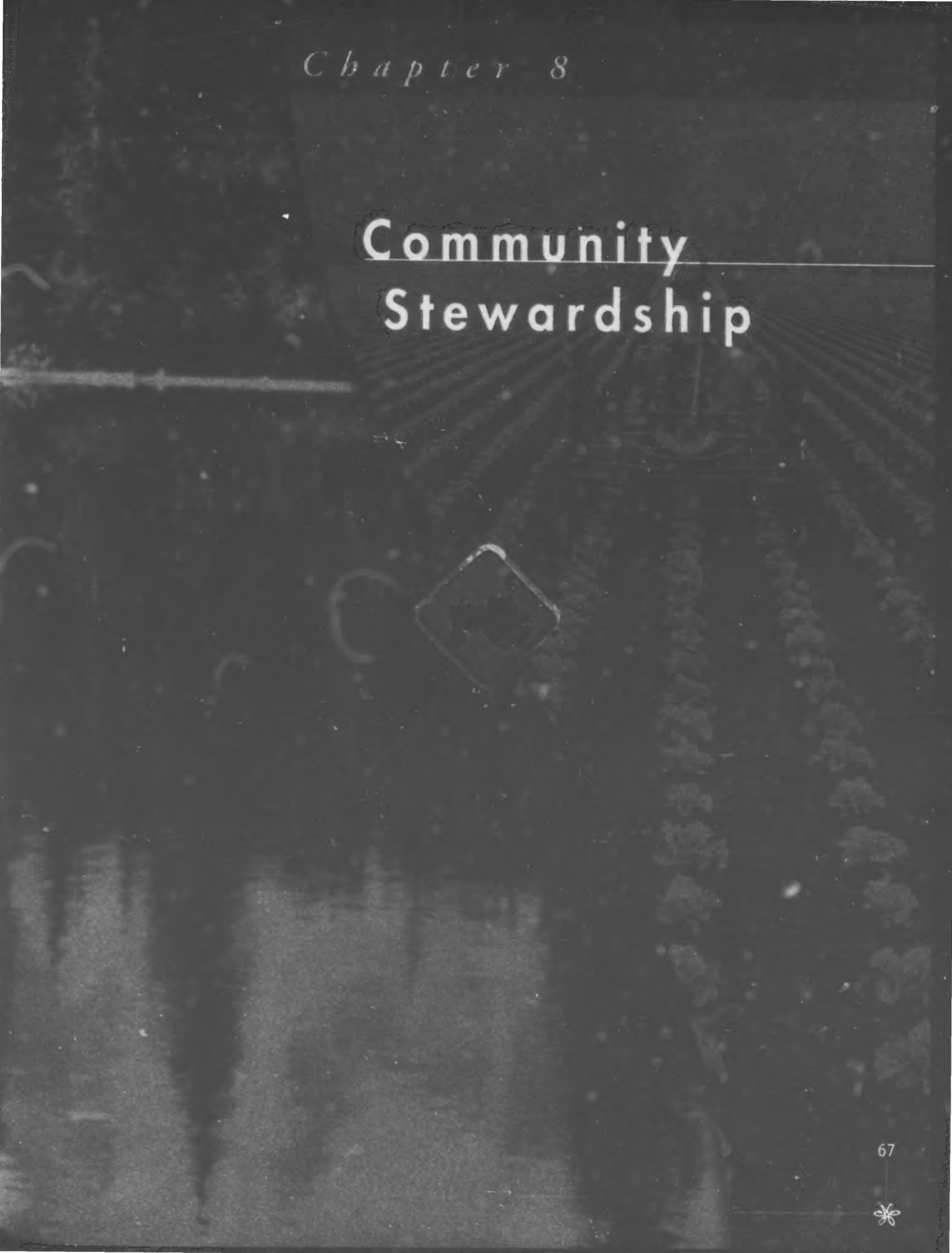
As noted in Chapter 4, one of the most significant trends over the past 10 years has been the emergence of the market as a factor in conservation. Third-party certification, for example, has emerged to recognize industry leaders in conservation.

Governments have no formal role to play in the development of certification standards, as they are by nature voluntary. Nevertheless, governments at all levels may be able to recognize and promote these standards and the companies that adopt them. In many cases, these voluntary standards may even be integrated into government regulations over time, thus raising the bar for entire sectors.

The growing engagement of industry partners in seeking conservation solutions on the ground is another important trend identified by the Round Table. At the same time, tools do not yet exist to encourage and promote these stewardship activities. There is a need to accelerate the identification and adoption of such tools, which will complement integrated planning processes in both allocated and unallocated landscapes.

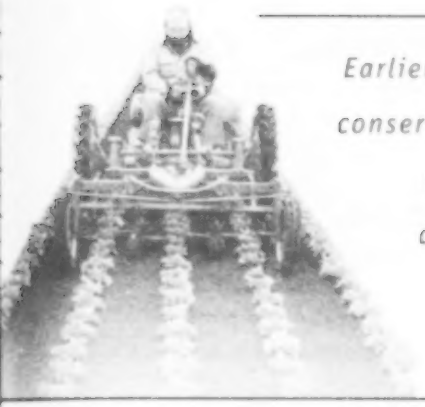
Chapter 8

Community Stewardship



One of the key challenges we face in securing our natural capital is bridging the divide between global expectations and the needs of the local communities that can make stewardship a reality.

Chapter 8



Earlier chapters of this report spoke of Canada's unique opportunity to conserve nature and of growing international expectations that Canada will act as a global leader in nature conservation. One of the key challenges we face in securing our natural capital is bridging the divide between these global expectations and the needs of the local communities that can make stewardship a reality.

THE Round Table emphasizes that people and communities are *part* of the landscape. Thus conservation planning should respond to the needs of local communities and Aboriginal peoples by emphasizing their role as stewards of nature and by working to ensure that nature conservation brings them social and economic benefits.

This approach requires greater acknowledgement of the role that municipal governments can play in fostering stewardship at a local and regional level. It also requires better access for municipal officials to information and innovative tools that can support their decision making. And it means engaging a broader range of landowners and other interested parties in building long-term solutions that benefit both nature and communities.

Communities across the country face different challenges. But whether they live in urban, rural or agricultural communities, Canadians care about nature and want to find ways to ensure its long-term sustainability. They are also increasingly aware that healthy natural systems are critical to their own social and economic well-being, as well as their quality of life. The challenge, then, is to design incentives and supports to effectively engage Canadians as stewards of our lands and waters.

In this chapter, the Round Table explores some of these issues and identifies ways to ensure that conservation efforts engage local communities and reflect their needs. At the same time, the Round Table recognizes that these communities face broader economic and social issues that are beyond the scope of this report. Accordingly, its recommendations do not attempt to address the issue of community economic growth and sustainability in its entirety.

8.1 COMMUNITIES IN CANADA ARE IN TRANSITION

Some Canadian communities, particularly in rural areas, are in crisis as a result of a combination of factors such as low commodity prices (especially in the agricultural sector), declining numbers of farmers, and lack of access to resources (either because the resources are in decline, as in the case of east coast fisheries, or because of restrictions on resource extraction).

Other communities, including "gateway communities" (which are situated close to areas of great natural or cultural significance) are booming and face new and unanticipated challenges because of their rapid pace of growth. Rural communities on the urban "fringe" face another set of challenges and opportunities. What unites these communities is the desire to find ways to sustain their economic viability, natural capital and quality of life over the long term.

R3 communities

Rural, resource-dependent, remote (R3) communities are dotted across almost 90 percent of Canada's land base. Their traditional dependence on natural resource extraction makes them vulnerable to shifts in the availability of the resource, resource prices and trends in global markets.

In general, these communities want better recognition for their contributions to nature conservation. They want to see real commitments by consumers, urban residents and governments to pay more for the ecological services these communities sustain for the public good. In other words, they increasingly want to reap the social and economic benefits of nature conservation.

R3 communities do not want to become museums of either nature or culture. They seek vibrant, well-rounded ways of life in which nature plays a much larger role than in an urban setting. They want better access to knowledge and the opportunity to be full partners in making decisions that affect the lives, livelihoods and success of current and future generations. Decision support systems and information can be in short supply, especially during times of crisis or transition.

Urban communities

Urban communities face different challenges when it comes to nature. Many cities are struggling to maintain or create natural capital by preserving parks and other green spaces, creating habitat for wildlife, and implementing naturalization programs such as tree planting. Such activities offer a variety of payoffs. The Evergreen Foundation, for example, believes that access to parks and open space has become a new measure of community wealth—an important way to attract businesses and residents by guaranteeing both quality of life and economic health.[72]

The vast majority of Canadians live in cities, and even more are expected to do so in the next 20 years. The ecological footprint of our urban centres is also expanding, as urban sprawl and the development of suburban infrastructure and transportation corridors put pressure on biodiversity, water quality and surrounding rural communities. Urban communities need to gain a better understanding of their connections with communities on their borders, and of their dependence on the natural systems that surround them. The proposed development of the Oak Ridges Moraine (see box)—and growing public awareness of the critical role the moraine plays in providing clean water to the entire Greater Toronto Area—serves as a reminder of these urban-rural links and the importance of planning for conservation across entire regions.

Agricultural communities

Agricultural communities play a critical stewardship role that often goes unrecognized in Canadian society. In addition to producing their traditional commodities, these communities also provide important public goods such as clean air and water, as well as fish and wildlife habitat. Although these and other ecological services benefit us all, the cost of maintaining them is often borne by these communities alone.

The agricultural sector is in the midst of a long and difficult period of transition in Canada. Farming communities face declining prices for their goods and rising subsidies for their competitors. Consumer pressure for "green" products is growing, particularly

SMART GROWTH AND URBAN SPRAWL: THE OAK RIDGES MORAINE

The Oak Ridges Moraine stretches for 160 kilometres across 34 municipalities and four counties in the Greater Toronto Area (GTA). The moraine contains some of the most significant tracts of forested lands in the GTA, as well as the headwaters of most of the waterways that provide Toronto's drinking water, leading some to call the moraine the "rain barrel" of southern Ontario. In 2001, as part of its Smart Growth strategy, the provincial government introduced a freeze on development on the moraine, which had been slated for suburban development. Legislation was then unanimously passed by the provincial government to ensure protection of 49,200 acres of the moraine, 62 percent of which cannot be opened up to subdivision development without reopening the legislation. All local municipalities must now ensure that their community plans conform with the legislation.

Source: Federation of Ontario Naturalists, Oak Ridges Moraine, available at www.ontarionature.org/issues/orm.html

in Europe. At the same time, the long-term economics of farming is leading to profound intergenerational shifts, with younger generations increasingly leaving their farms and communities to find new ways to make a living.

The recent federal-provincial Agricultural Policy Framework (APF) seeks to provide Canadian farmers with income security and prepare the sector to compete in changing world markets. The Round Table sees the APF as an important attempt to make natural services a core component of the sector's future.

However, some participants in the Conservation of Natural Heritage Program expressed concerns about the extent to which farmers have been involved in the design and implementation of the APF. Participants went on to underscore the importance of continuing to consult with agricultural communities at all stages of development of the APF—if they are to embrace the APF, farmers will need to see their concerns reflected in its programs.

Agricultural communities are concentrated in Canada's most southern regions. These areas also have the highest concentration of different types of species (or "species richness") in the country. However, 14 of Canada's 177 terrestrial natural regions are at high risk of biodiversity loss, mainly due to competing land uses such as urbanization and agriculture.[73]

These landscapes, and the people who manage them, provide Canadians with critical ecosystem services. Wetlands, for example, filter the water on which many city dwellers depend. Programs such as the Conservation Cover Incentive Program (see box) and Alternative Land Use Services (ALUS)[74] as proposed by the Delta Waterfowl Foundation recognize the important role that landowners play in delivering these valuable ecosystem services.

However, pressures on these ecosystems are growing rapidly, as urban sprawl accelerates and more agricultural lands are converted to transportation networks and far-flung suburbs. An estimated 90 percent of southern Ontario's original woodland cover has already been converted to agricultural use or urban landscapes. As a result of these intense human pressures, southern Canada has the highest numbers of species at risk in Canada.[75]

DUCKS UNLIMITED: PROPOSAL FOR A CONSERVATION COVER INCENTIVE PROGRAM

Ducks Unlimited Canada has proposed a national Conservation Cover Incentive Program that provides an economic incentive for landowners to convert marginal agricultural land to conservation cover, and protect or restore degraded riparian zones and manage these to enhance the provision of environmental goods and services.[1] Agreements with landowners are being sought to maintain long-term securement of the restored lands and the benefits they provide.

[1] Ducks Unlimited Canada, "A Conservation Cover Incentive Program," draft discussion paper, October 17, 2001.

We need strategies to maintain and, in some cases, restore these valuable ecosystems. Because a relatively high proportion of our southern, species-rich land is privately owned, it requires different conservation strategies than those proposed in other chapters, which focus on publicly held land. The next five years are an important window of opportunity to consolidate and build on the work of groups such as Ducks Unlimited and the Nature Conservancy of Canada to encourage landowners in these areas to commit to conservation.

8.2 CURRENT PROGRAMS

A number of programs and initiatives across the country aim to engage local communities in nature conservation.[76] For example, a wide variety of watershed planning projects and approaches are being used to maintain the health of key watersheds and ecosystems and restore ecosystems that have been degraded. Both Ontario and British Columbia have established watershed planning processes (such as B.C.'s Living Rivers Framework) that promote regional approaches to keeping rivers and their watersheds healthy. Similarly, the Nature Conservancy of Canada (NCC) and local land trusts have developed "conservation blueprints"—methodology for ecoregional planning that enables them to set conservation priorities for entire ecoregions. Focusing on those regions under the greatest human pressures, the NCC uses consolidated data sets, GIS technology and community input to identify sites of greatest biodiversity value, threat and opportunity.

In addition, Environment Canada, in partnership with the provinces and territories, has introduced ecosystem initiatives that respond to the problems of particular areas and communities across the country. The St. Lawrence Action Plan and the Atlantic Coastal Action Plan, for example, are characterized by a commitment to an ecosystem-based approach, federal-provincial partnerships to maximize integration, and participation by local communities in the design and implementation of activities. These initiatives also seek to build the capacity of all participants to make better stewardship decisions.

Similarly, the federal government, in partnership with Ontario, has long been involved in efforts to restore degraded areas within the Great Lakes basin. The Great Lakes Remedial Action Plan seeks to restore 42 "areas of concern" in the basin to a level that meets both government and public expectations. Communities sit at the table to design action plans, which must also be ratified through public consultation. The program has been a critical mechanism for engaging communities in restoring and maintaining this important ecosystem.[77]

Canada's Biosphere Reserve Program is another innovative mechanism for involving local communities in whole-landscape approaches. Biosphere reserves are designated by the United Nations Educational, Scientific and Cultural Organization in areas that demonstrate innovative approaches to living and working in harmony with nature. Biosphere reserves include core protected areas, buffers and broader "areas of cooperation," where communities seek new ways to maintain ecological integrity while sustainably using natural resources. These areas of cooperation are an important model for exploring connectivity and whole-landscape approaches in full partnership with local communities. There are currently 12 biosphere reserves in Canada, distributed across seven provinces.[78]

Recently, Agriculture and Agri-Food Canada announced the Greencover Initiative. Greencover is a $110-million national effort to promote sustainable land use and expand the area covered by perennial forages and trees by up to 1.6 million hectares over five years. The benefits would include economic production alternatives for farmers, land conservation, improved grassland management,

BENEFITS OF URBAN NATURALIZATION

According to a recent review,[1] the benefits of urban naturalization include:

- **enhancing environmental health by rehabilitating degraded landscapes;**
- **providing habitat for native birds, butterflies and other insects;**
- **increasing biodiversity by using native plant species;**
- **eliminating the need for chemical pesticides, fertilizers and herbicides;**
- **learning first-hand about the natural world and the ecological processes that support it; and**
- **strengthening community ties by fostering a sense of cooperation and instilling feelings of pride and stewardship.**

[1] Evergreen Foundation, *Ground Work: Investigating the Need for Nature in the City*, 2000.

protection of water quality, reduced greenhouse gas emissions and enhanced biodiversity and habitat.[79]

8.3 KEY CHALLENGES

Despite growing recognition of the importance of involving communities in nature conservation—from the creation of parks and protected areas to the protection of local habitats—*our track record in engaging rural communities in nature conservation has been mixed at best.*

One of the key challenges is one of perception. R3 communities in particular have often seen conservation initiatives as running counter to their interests — as an impediment to resource development that brings concrete economic benefits. Yet through their actions, many rural Canadians—both Aboriginal and non-Aboriginal—have demonstrated their commitment to nature conservation. It is a commitment that stems from direct dependence on our lands and waters.

Another problem is the lack of consistent approaches or standardized tools to support the participation of local communities in regional conservation planning, although there are a number of important models across the country. Communities and individual Canadians need to be engaged more effectively and consistently in efforts to maintain healthy ecosystems and restore degraded ones.

A third challenge is the rapid pace of landscape pressures, particularly along the urban-rural fringe. City dwellers have not internalized the true costs of their lifestyles: although their ecological footprint extends far beyond city borders, city dwellers have yet to bear the costs associated with lost biodiversity and poorer air and water quality. Reflecting these costs in decision making—and ensuring that those who benefit from using our natural capital also pay for it—is a shift that will help communities become more effective stewards of their lands and waters.

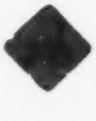
The lack of incentives for communities and private landowners is another barrier to stewardship. Incentives are inadequate to ensure that natural capital, particularly on private lands, is maintained. Landowners and local decision makers also face a lack of information about regional ecological values and the conservation solutions they could adopt.

8.4 RECOMMENDATIONS

Engage communities in regional conservation planning

The Round Table recognizes that it is critical for communities to be involved in conservation planning to ensure that conservation solutions provide ecological, social and economic benefits. In essence, communities need to be at the table to participate in the decisions that affect them.

As an immediate first step, the Round Table urges all governments to work with local communities and other sectors in adopting conservation planning for entire regions. Based on its findings, the Round Table believes that one of the priority regions where immediate action is necessary is the southern landscape. This landscape is highly fragmented and has little conservation potential left. However, there is great opportunity for local communities to become stewards of this landscape and ensure that priority sites that are still undeveloped remain so. To accomplish this goal, communities must have the opportunity to participate effectively in planning and monitoring activities.



Recommendation 9: **The Round Table recommends that the federal government accelerate efforts to conserve priority sites in highly fragmented southern landscapes by supporting local communities in planning and monitoring activities.**

One example of work to support community participation is provided by Environment Canada's Ecological Monitoring and Assessment Network Coordinating Office (EMAN CO). EMAN has successfully been developing and testing a consistent model and standardized tool set for engaging citizens and community decision makers in generating and using environmental information to improve local decisions related to conservation and sustainability.

The resulting Canadian Community Monitoring Network, developed in partnership with the Canadian Nature Federation, provides tested strategies and critical success factors for applying a consistent model and standardized tool set in communities across Canada. Development and application in multi-community landscapes has been initiated. However, despite interest from communities, conservation authorities, provinces and others, plans to implement the program further have been stalled for lack of resources.

The Biosphere Reserve Program is another mechanism for engaging communities in planning, one that also contributes to broader stewardship and sustainable development efforts. A lack of sustained funding and institutional support has weakened the program, however, leaving most reserves to rely on volunteers alone. Strengthening the capacity of this program would provide an important mechanism for encouraging conservation across the country.

Recommendation 10: **The Round Table recommends that the federal government establish a Canadian Biosphere Reserve Secretariat housed at Environment Canada to coordinate the work of the reserves and share best practices in engaging communities in regional conservation planning.**

A core element of community participation in conservation is emphasizing the role of young people in conservation initiatives. The Round Table believes that young people should be given the capacity to be able to engage effectively in conservation planning and management decisions. The federal government could explore the potential to establish a "conservation corps" as a part of its Youth Employment Strategy. This mechanism would enable young people across Canada to obtain job experience while contributing to conservation efforts across the country.

Provide incentives for landowners

Accelerating conservation planning requires engaging not only communities as a whole but also individual landowners, who can be critical players in southern landscapes. Incentives directed to these landowners can play a significant role in encouraging stewardship actions, from changes in farm practices to the donation of ecologically sensitive lands to conservation agencies. Below are immediate measures that the government could adopt to ensure that key stewards are supported in their conservation efforts.

Provide incentives for conservation measures: Farmers can adopt a wide variety of measures to enhance ecological services on their lands. Some of these measures could be introduced in the context of Environmental Farm Plans (EFPs).

There are seven EFP programs across the country, in Alberta, Ontario, Quebec and each of the Atlantic provinces. Under these programs, farmers voluntarily prepare an EFP that identifies areas of environmental concern and sets goals for improvement, often in return for a financial incentive. Participants in Ontario, for example, receive a cash transfer of up to $1,500 per farm business to support the implementation of new management practices. As of May 30, 2001, approximately 20,000 farm families were participating in the program.[80]

Most EFP programs are delivered by independent organizations across the country, and have been designed to meet the needs of farmers in each region. The Agricultural Policy Framework is seeking to enhance EFPs as part of its national programs, although delivery of EFPs would remain with local organizations.

Additional incentives for farmers could be linked to the adoption and implementation of EFPs and their equivalents. These incentives could also be used to integrate EFPs into regional conservation plans.

Recommendation 11: **The Round Table recommends that Agriculture and Agri-Food Canada and Finance Canada, in partnership with provincial governments as appropriate, introduce a suite of specific incentives for landowners through Environmental Farm Plans or their equivalents. While these incentives may vary by jurisdiction, priority should be placed on:**

- **accelerated capital cost allowance claims on conservation equipment, such as flushing bars, fencing, watering and manure management facilities;**
- **cost-sharing for capital improvements and equipment related to conservation objectives;**
- **priority qualification or premium benefits for agricultural support, credit and insurance programs; and**
- **technical assistance and other extension and support services.**

Provide incentives for donating ecologically sensitive land: **The Ecogifts Program is another important** tool for encouraging landowners to conserve natural capital. Through the program, tax incentives are offered to landowners who donate ecologically sensitive lands or easements on their land for conservation purposes. Since its establishment in 1995, more than 21,000 hectares of ecologically sensitive land have been conserved through the program.[81]

Despite this success, proponents of the program have identified three areas as warranting attention by the federal government in order to realize the full potential of the Ecogifts Program and enable all Canadians to participate:

- ***Allowing tax receipts to be issued for donations that are part of "below market" or "bargain" sales:*** **Many** of Canada's ecologically significant private lands are found on working landscapes. Owners of such lands often cannot afford to gift the land outright but are willing to sell the land to a conservation charity for significantly less than the appraised market value and receive a tax receipt for the portion of the land donated (i.e. the difference between the purchase price and the fair market value of the land). However, the accepted definition of a gift is "a voluntary transfer of property owned by a donor to a donee, in return for which no benefit flows to the donor." A receipt cannot be issued for the donation portion of a discount sale of property because the entire transaction is considered a sale, not a gift.
- ***Reducing the capital gains tax on ecological gifts to zero:*** **Under the Income Tax Act, any disposition of** land, whether by donation or by sale, is deemed to have occurred at fair market value, with any increase in value thereafter being taxed as a capital gain. Landowners who donate their lands are accordingly taxed on their notional capital gains, even though

A SUSTAINABLE COMMUNITY: OKOTOKS, ALBERTA

In 1998, the community of Okotoks recognized that its master plan should respect the carrying capacity of its watershed, rather than continuing to push the environmental limits of growth.[1] The community created a sustainable development plan that reflects the key goals of its residents: to preserve their small-town way of life and stimulate respect for the environment.

The town focused on creating a balance between economic opportunity, social consciousness and environmental stewardship, and also looked beyond traditional municipal boundaries to embrace a regional ecosystem approach. A key objective of the plan is to live within the carrying capacity of the Sheep River watershed. The plan also seeks to protect an urban/rural transition zone to ensure that aesthetic values are maintained and that the town does not become a bedroom community for Calgary. Partnerships with a variety of government, university and community organizations were critical to the success of this plan.

Source: Federation of Canadian Municipalities, Sustainable Communities, Okotoks, Alberta Case Study, available at www.nrcan.gc.ca/media/newsreleases/2000/200027a_e.htm

they have received no such income. Although amendments to the Income Tax Act have partially addressed this problem, it remains a barrier to conservation. Removal of the capital gains tax on ecological gifts would encourage more owners of ecologically sensitive land to donate the title or conservation easements to a conservation organization.

- ***Expanding the program to include inventory lands:*** The disposition of land held as inventory yields a profit rather than a capital gain (because it is not a "capital asset"), 100 percent of which is deemed income for income tax purposes. Such land is not eligible for tax benefits under the Ecogifts Program, which applies only to capital gains associated with ecological gifts. As the Ecogifts Program is intended to offer incentives to preserve significant ecological areas, it should apply to all people and companies owning qualified land, regardless of how the land is held. Extending the program to apply to lands held as inventory would foster the conservation of areas such as the Oak Ridges Moraine, where some ecologically sensitive land is part of the inventory of development companies.

In December 2002, Finance Canada released technical amendments to the Income Tax Act that appear to have addressed the bargain sale issue. Through amendments to section 118.1, subsections were added to clarify the circumstances under which a transfer of property will be considered a gift, notwithstanding that the donor may be entitled to receive an advantage or benefit in respect of the property. New subsection 248(30) provides for an "eligible amount" of the gift, defined as the amount by which the fair market value of the property that is the subject of the gift exceeds the amount of advantage, if any, in respect of the gift.[82]

Recommendation 12: **The Round Table recommends that the federal government enhance the Ecogifts Program to further encourage private landowners to conserve ecologically sensitive lands. Enhancements would include:**

- **removing the remaining capital gains tax on gifts of ecologically sensitive lands and easements; and**
- **including donations of ecologically significant lands held by corporations or individuals as part of the inventory of their businesses.**

These proposed amendments, which have yet to be finalized in legislation, seem to have paved the way for part sale/part donation transactions to conserve land, as the difference between the purchase price and the appraised value should be considered an "eligible amount" for charitable receipt purposes. Assuming the above, an important new tool has been introduced to

encourage private landowners to conserve their ecologically sensitive lands, yet barriers still remain to realizing the full potential of the Ecogifts Program.

Enhance benefits to local communities from conservation

As noted earlier in this report, new mechanisms are needed to ensure that local communities benefit from conservation. As we engage communities in conservation through immediate measures such as planning and incentives, longer-term measures are needed to benefit and sustain communities for future generations.

Tourism provides one way for R3 communities to maximize the economic benefits of living near protected areas. Tourism strategies are typically based on local knowledge and the unique ecology, history and culture of the protected landscape.

An advisory committee struck by the Minister of Canadian Heritage in 1996, for example, recommended the development of a heritage tourism strategy for the entire Banff Bow Valley area. The Banff/Lake Louise Tourism Bureau subsequently organized a Heritage Working Group composed of high-level representatives of the public and private sectors. The resulting strategy aims to:

- make all visitors aware they are in a national park by fostering their appreciation and understanding of the ecology, history and culture of Banff National Park and the Banff Bow Valley area;
- encourage and develop opportunities, products and services consistent with heritage values;
- encourage environmental stewardship initiatives, on which sustainable heritage tourism depends; and
- strengthen employee orientation, training and accreditation programming as it relates to sharing heritage understanding with visitors.

As one of the most important partners in the strategy, Parks Canada has agreed to collaborate with the tourism industry to market high-quality heritage experiences and to use its communications capacity to promote heritage to park visitors. It also agreed to include the heritage tourism strategy as part of the Banff National Park management plan for 1997–2002.

Other gateway communities could use similar strategies. However, there is currently no national framework to support the development or promotion of these strategies.

Recommendation 13: **The Round Table recommends that the federal government, with partners such as the Tourism Industry Association of Canada, develop a national sustainable tourism strategy to enhance the economic benefits associated with protected areas for local communities.**

Build knowledge and decision-making supports

Agricultural and other R3 communities have traditionally relied on the wealth of their natural resources and their agricultural productivity to sustain their quality of life. A variety of factors have dramatically changed these communities and pose major challenges to their long-term sustainability.

These communities need tools to monitor the ecological systems on which they depend and to make decisions that support their long-term social, environmental and economic well-being. This applies equally to resource-dependent communities, who may see conservation initiatives as running counter to their interests, and to new gateway communities that are attracting people who choose to move to a community because of its proximity to nature.

Gateway communities near new parks often experience rapid changes in their economic structure due to the expansion of tourism facilities and services to meet growing demand. Managing growth is a major issue for such communities.

A good way to get decision-support systems for nature conservation out to R3 and gateway communities is to more effectively integrate such systems into existing rural support programs such as the Sustainable Communities Initiative. Launched through Natural Resources Canada's GeoConnections program, this initiative is designed to build the capacity of small communities to pursue sustainable development by using geographical information available to Canadians through the Internet and other sources.

GIS decision-support tools are an important part of a community's ability to plan proactively for conservation, but they are only part of the answer. R3 communities also need social and economic decision-support tools to effectively implement sustainability programs. The Round Table did not identify a complete suite of social and economic decision-support tools. However, it does recommend that more work be done in this area.

Recommendation 14: The Round Table recommends that the federal government, in partnership with the Federation of Canadian Municipalities and other agencies, invest in the development of computerized and GIS-based decision-support systems that can be used by R3 and other communities in social, economic and conservation planning and community development. The Round Table has two further recommendations: 1) that Natural Resources Canada's GeoConnections program be renewed with an expanded Sustainable Communities Initiative and 2) that the expanded Sustainable Communities Initiative should include piloting the use of these decision-support systems in an additional 10 R3 communities per year.

Conservation of Marine Ecosystems

With the longest coastline in the world and all but two provinces bordering on the sea, Canada is inarguably a maritime nation. Canada's oceans are rich in diversity.

Chapter 9

With the longest coastline in the world and all but two provinces bordering on the sea, Canada is inarguably a maritime nation. Canada's oceans are rich in diversity, from the sea floor with its underwater mountains, canyons and sediment beds to the coastal zones that are a vital transition between land and sea.

YET Canada's marine ecosystems are under increasing stress. Fishing and transportation, long the main activities in marine and coastal waters, have been joined by a variety of other development pressures. The results are evident: marine habitats have been dramatically altered by overfishing, the introduction of exotic species, land-based sources of pollution, and physical damage caused by trawlers, oil and gas development, and underwater infrastructure such as cables, electricity lines and pipelines. In addition, the impact of climate change—on ocean currents and the melting of Arctic Ocean ice—brings a whole new set of concerns.

There are many similarities between approaches for conserving terrestrial and marine ecosystems. The principles of conservation biology discussed in Chapter 3, for example, appear to be as applicable to protecting biodiversity in the oceans as on land. Indeed, scientists are increasingly exploring strategies to avoid the loss of biodiversity in marine ecosystems and to protect key corridors used by migratory species.

One of the main differences between marine and terrestrial approaches to conservation, however, is in the role of the federal government. The federal government is the dominant regulator and manager of the oceans, whereas the provinces and territories have the lead in advancing conservation of the terrestrial environment. However, provincial and territorial levels of government must also be involved in advancing more integrated oceans management.

9.1 EMERGING TOOLS FOR THE CONSERVATION OF MARINE ECOSYSTEMS

Marine protected areas (MPAs) are emerging as an important part of a new approach to marine conservation that considers the functioning of marine ecosystems as well as the role of species in these ecosystems, their habitat needs and their interactions with one another.[83] The term "marine protected area" can apply to a broad range of formal designations that provide long-term legal protection for the seabed, water column and plants and animals and their habitats. MPAs can range in size and level of protection, from reserves totally closed to consumptive uses to multiple-use areas that allow for human uses compatible with the MPA's conservation objectives.

Various complementary federal programs exist for the establishment of MPAs. The Oceans Act (1997), administered by Fisheries and Oceans Canada, provides for MPAs to be established to protect and conserve commercial and non-commercial fishery resources and habitats, endangered and threatened marine species and their habitats, unique habitats, marine areas of high productivity or biodiversity, and any other habitat or marine resource needing special protection.

Before an area can be designated an MPA, it must first be identified as an "area of interest." Canada's first Oceans Act MPA was designated in March 2003, and 12 other areas of interest have been identified. Oceans Act MPAs are designated by regulation and therefore are not necessarily designated in perpetuity. Activities of various types will be permitted provided they are consistent with the conservation objectives set out in the site's management plan, which is developed

by Fisheries and Oceans Canada in cooperation with interested sectors. In addition, there is no process for Parliament to review MPA management plans or amendments to these plans.

Parks Canada administers the Canada National Marine Conservation Areas Act, which was passed in June 2002. National marine conservation areas (NMCAs) are established to protect and conserve for all time marine areas representative of Canada's 29 marine natural regions in the three oceans and the Great Lakes, as well as to encourage public understanding, appreciation and enjoyment of Canada's marine heritage. NMCAs are multiple-use MPAs with both fully protected zones and zones for ecologically sustainable use, but with no non-renewable resource exploration and extraction or ocean dumping. Comprehensive consultation is required to establish an NMCA and to develop management plans for each site. The management plans are tabled in Parliament and sites are established by order in council, with Parliamentary scrutiny. NMCAs, like national parks, are established in perpetuity.

Two other pieces of federal legislation, administered by the Canadian Wildlife Service (Environment Canada), protect nationally significant marine wildlife and habitat: the Canada Wildlife Act, which provides for the establishment of marine wildlife areas (MWAs) in Canada's oceans outside the 12-mile limit and national wildlife areas (NWAs) within the 12-mile limit; and the Migratory Birds Convention Act, which provides for the establishment of migratory bird sanctuaries.

Although MPAs hold significant promise, progress in establishing a representative network in Canada has been slow. More than 150 MPAs have been established using a variety of legislative tools, but most are small and provide very limited protection for the marine environment. Only three sites—the Saguenay–St. Lawrence Marine Park, Pacific Rim National Park Reserve and Fathom Five National Marine Park in Georgian Bay—meet minimum protection standards established by international conservation organizations.

Other changes to oceans management in Canada include the development of a new approach to fisheries management based on a more sophisticated understanding of the role of habitat and ecosystems, which is superseding the single-species approach of the past. This new ecosystem approach can be seen in the increase in integrated fisheries management plans, the use of selective fishing gear and practices, and the collection of benchmark data.

Another tool of growing importance is integrated planning and management. Canada's Oceans Act was introduced with an explicit mandate to implement an integrated approach to the management of oceans. Integrated management refers to a combination of policies and programs aimed at enhancing coordination and planning between the agencies and players involved in marine management.

Canada's Oceans Strategy defines the vision, principles and policy objectives for oceans management in Canada. The strategy commits the federal government to undertake a wide range of activities such as:

- integrating scientific and traditional ecological knowledge to increase our understanding of marine ecosystems;
- reducing marine pollution;
- developing a strategy for a national network of MPAs;
- promoting development of a "state of the oceans" reporting system;
- establishing and implementing a policy and operational framework for improving the quality of the marine environment;
- using integrated management to resolve conflicts and manage human activities in ocean areas where multiple interests are involved;
- promoting stewardship and public awareness;
- supporting the implementation of the National Programme of Action for the Protection of the Marine Environment from Land-based Activities;
- examining regulatory regimes to ensure effective environmental protection and streamline regulations;
- developing a framework for a National Programme of Action for the Protection of the Marine Environment from Sea-based Activities to address priorities such as ballast water discharges and the introduction of exotic species;
- helping developing countries build their capacity to sustainably develop their marine resources and oceans; and

- promoting international collaboration to protect globally shared fisheries and ocean resources.

Another key aspect of the program is a commitment to meeting the changing needs of communities as they strive toward sustainability.

9.2 KEY CHALLENGES

One of the most significant barriers to advancing marine conservation in Canada is the extent to which responsibility for protecting marine habitat is fragmented and spread among various agencies and jurisdictions. Within the federal government alone there are more than 35 pieces of legislation and at least 25 agencies concerned with marine management. In addition, although the federal government has primary jurisdiction over the oceans and the continental shelf, authority for some portions of the coastal zone is shared by the federal government with provinces and territories. This has resulted in confusion, duplication of effort and protracted delays in making decisions that affect ocean users.

There is also a lack of coordination within the federal government. Although Fisheries and Oceans Canada has a mandate under the Oceans Act to coordinate the efforts of the three federal agencies that can establish MPAs—Fisheries and Oceans Canada, Parks Canada and Environment Canada—there is no comprehensive federal approach to MPAs. Fisheries and Oceans Canada has taken a "learning by doing" approach to Oceans Act MPAs, by identifying a series of pilot Oceans Act MPA sites on Canada's coasts. Parks Canada has developed a systems plan based on 29 marine regions but has not identified specific sites for all of them, and Environment Canada has yet to identify the sites that would complete its marine system of national and marine wildlife areas. The lack of a coordinated national plan for MPAs has led to uncertainty among resource users that in some cases has translated into fear and diminished support for conservation initiatives.

A third major challenge is our limited knowledge of the oceans compared with what is known about the land. For example, decision makers have extremely limited knowledge about the seabed and the habitat it provides for key species. In essence, we do not know enough about the underwater topography of important marine habitats to manage them effectively. Much of the bottom of Canada's oceans is mapped at only a very rough scale and, even though ecosystem management requires an understanding of marine food webs, many of the links between marine species are not well understood.

9.3 RECOMMENDATIONS

Accelerate the development of a national network of MPAs

The Round Table recommends that immediate steps be taken to accelerate the development of a national network of MPAs, as committed to by the federal government at the 2002 World Summit on Sustainable Development.

As previously described, efforts to establish MPAs lag far behind similar efforts on land. Yet our marine ecosystems are under increasing pressure from a variety of sources, from climate change and land-based

sources of marine pollution to exponential increases in oil and gas exploration and development. Conservation planning for marine ecosystems needs to be sequenced. As with the terrestrial experience, marine conservation planning needs to occur before or in tandem with development decisions, while the opportunity still exists.

There is great potential for Canada to create a national network of MPAs that would significantly contribute to securing the natural capital contained in our oceans. The complementary nature of the MPA programs of Parks Canada, Environment Canada and Fisheries and Oceans Canada—and increasing coordination among the three agencies—should facilitate the development of such a network. Cooperation with NGOs, resource users and others is also critical. An initiative to identify areas of high conservation value and establish marine protected areas would make a significant contribution to securing the natural capital contained within our oceans.

Recommendation 15: The Round Table recommends that the federal government develop a comprehensive strategy to complete the network of MPAs by 2003.

The Round Table also recommends that the federal government develop comprehensive plans for establishing MPAs in each marine region of Canada: for the Pacific Coast by 2003, the Atlantic by 2004 and the Arctic by 2005. These plans should be based on the identification of areas of high conservation value in each region.

Finally, the Round Table recommends that federal agencies with MPA programs adopt the following targets:

- five new Oceans Act MPAs by 2004 and an additional 10 sites by 2010;
- five new national marine conservation areas by 2007 and 10 additional sites by 2010; and
- five new national or marine wildlife areas by 2007.

Accelerate the implementation of Canada's Oceans Strategy

Another immediate step to moving conservation forward on Canada's marine front is to accelerate efforts to implement Canada's Oceans Strategy. Canada's Oceans Act was explicitly designed to address the need for a comprehensive approach to managing the diverse uses of the country's oceans. The Act called for the development of the oceans management approach that is embodied in Canada's Oceans Strategy—a strategy based on the principles of ecosystem management, sustainability, integrated management and precaution.

A key feature of this strategy is its integrated management program, a comprehensive planning and management process that strives to minimize conflict between ocean users. This innovative process encourages collaboration among multiple parties while respecting regulatory and legislative authorities. There is growing evidence that integrated resource management is instrumental to reconciling competing demands on increasingly fragmented marine habitats.

This integrated management program is a vital counterpart to the conservation planning framework outlined in other chapters of this report, with the added benefit that the Oceans Act provides an institutional framework and legal mandate for this approach. Given the importance of this approach to achieving significant and long-lasting conservation in the marine ecosystem, the federal government should provide adequate resources to speed up implementation of the Oceans Act and its programs.

Recommendation 16: The Round Table recommends that the federal government allocate $500 million over the next five years to implement Canada's Oceans Strategy. This would enable Fisheries and Oceans Canada, in collaboration with other federal departments, to accelerate the application of integrated management approaches across the country and the establishment of a network of marine protected areas under the Oceans Act.

Increase the information available for decision making

Integrated management planning requires detailed and timely information about marine ecosystems. Many types of information must be collected to develop a full picture of the ecosystem—everything from data on habitat critical to specific fish to information about whale migration and deepwater corals and sponges. Information about the marine environment from Aboriginal and local communities, industry and other parts of Canadian society must be collected and integrated for use in oceans management planning.

An important tool for gathering some of this information is multispectral analysis of the seabed. SeaMap, a proposed federal interdepartmental program that makes use of such analysis, would provide practical information about ocean habitats. The visual resolution of information collected under SeaMap, for example, would allow fishers to drag the ocean bottom in areas with marine resources (e.g. scallops) while staying clear of significant biodiversity concerns (e.g. corals, sponges). Multispectral analysis could also provide essential information for locating pipelines, cables and offshore oil and gas infrastructure, and in the future might be used to identify sites for offshore mineral development.

SeaMap, which is being developed through cross-country consultations to identify regional and national mapping priorities, would also provide invaluable information for managing decisions about conflicting land use in Canada's offshore lands or marine ecosystem.

Consolidating information from a variety of sources in a regular national report on ocean trends would give decision makers at all levels much-needed information about whether the health of the country's marine ecosystems is improving or declining. No such report is currently produced in Canada.

Recommendation 17: The Round Table recommends that the federal government allocate $50 million over five years to:

- fund the SeaMap program as part of efforts to create a multidisciplinary, integrated national database that would form the basis for decision making about marine conservation and management in Canada; and
- identify information gaps, collect new information and conduct additional research in partnership with the Ocean Management Research Network.

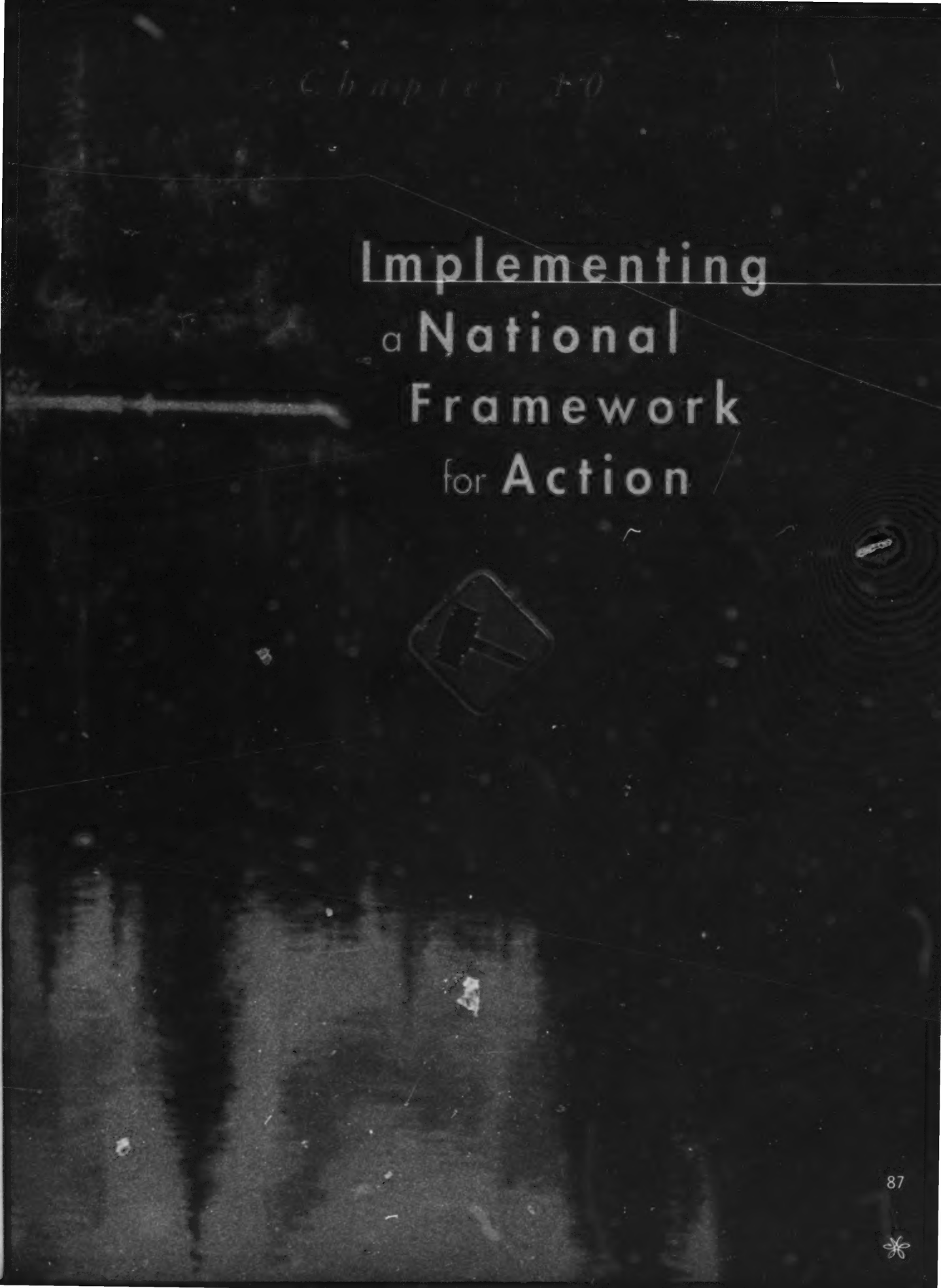
The Round Table also recommends that Fisheries and Oceans Canada take the lead in producing a "state of the oceans" report for Canada every five years.

Foster innovation

As Fisheries and Oceans Canada and other departments begin to implement the Oceans Strategy, the Round Table recommends that they seek ways to foster innovation within the marine sector. This includes encouraging the use of new technologies to conserve and enhance the ecological integrity of our marine environment, as well as seeking new, sustainable economic opportunities in the marine environment. Innovative tools are needed to support sustainable marine ecosystem management in the future.

9.4 SUMMARY

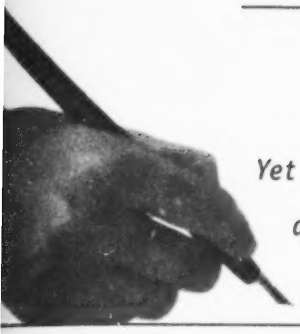
Marine ecosystems, despite their significance to Canada both environmentally and economically, have not received as much conservation attention as terrestrial systems. The Round Table believes that immediate steps need to be taken to ensure that the health of our seas is maintained. Immediate steps, such as developing a national network of MPAs and implementing Canada's Oceans Strategy, are crucial to ensuring their health and the health of those communities whose livelihoods are supported by the sea.



Implementing a National Framework for Action

Progress in meeting past commitments on the ground has been slow. New approaches are critical in order to secure the natural capital upon which our economy and quality of life depend.

Chapter 10



Canadian governments have made a series of individual and collective commitments to conserve nature over the past 20 years (see Chapter 4). Yet progress in meeting these commitments on the ground has been slow. In addition, we know that new approaches are critical in order to secure the natural capital upon which our economy and quality of life depend.

IN earlier chapters of this report, the Round Table outlined a series of specific measures that governments should adopt to accelerate conservation efforts in four key areas: conservation planning at a large landscape level, partnerships with industry, community stewardship, and integrated management of marine ecosystems.

At the same time, the Round Table recognizes the need to address overarching barriers to conservation if Canada is to position itself as a global leader in conservation solutions by 2010. Perhaps most importantly, new institutional arrangements are required to enable all governments—federal, provincial, municipal and Aboriginal—to work together to develop and implement a new vision for conservation in Canada.

As well, enhanced efforts are required at all levels of government to promote investment in natural capital and build the tools needed to factor the economic value of healthy ecosystems into decision making.

This chapter outlines a series of additional recommendations that the Round Table believes are essential to securing our natural capital and implementing a new vision of conservation in Canada.

10.1 RECOMMENDATIONS

Meet existing commitments

The Round Table has called on governments to reaffirm and revitalize their collective efforts to conserve nature in Canada.

As a first step, governments must meet their existing commitments to conservation, from completing systems of protected areas in the terrestrial and marine environments, to implementing the principles and specific priorities outlined in the Canadian Biodiversity Strategy—an important existing framework for intergovernmental cooperation on nature conservation.

These commitments are the building blocks of long-term ecological health and, as such, are essential for any effective conservation strategy in Canada. However, departments and agencies responsible for creating protected areas do not have the resources required to meet their conservation commitments, let alone consider new ones that reflect our emerging understanding of conservation needs. All orders of government need to make significant new investments to meet existing commitments and lay the foundation for a new generation of conservation goals.

Recommendation 18: To ensure that federal conservation priorities and commitments are fulfilled, the Round Table recommends that the federal government allocate over the next five years:

- $300 million to Parks Canada for new parks and for maintaining the ecological integrity of existing parks; and
- $175 million to Environment Canada to significantly enhance the network of national wildlife areas and migratory bird sanctuaries, particularly in the North.

The Round Table also recommends that, to ensure that these new resources are employed in the most effective and integrated ways possible, these departments work with Fisheries and Oceans Canada to develop and implement a more integrated Federal Protected Areas Strategy.

As a first step, the Round Table recommends that the federal government allocate resources to meet its commitments over the next five years, recognizing that departments may also require ongoing funding to maintain priority conservation programs and plan for the future. Many of these funds have already been requested by individual departments.

The Round Table believes that the announcement of new and stable resources will be essential to advance the immediate priorities set out in this report, as well as to take the first steps toward realizing the Round Table's new vision for conservation. The federal budget of February 2003 and a subsequent announcement in March provide a total of $218 million in new funding over the next five years to establish new parks and to maintain the ecological integrity of existing parks. A further $54 million per year in operational funding will be provided starting in 2008. Although this investment falls short of what has been recommended by the Panel on Ecological Integrity, recent commitments such as these are important beginnings.

At the same time, the Round Table recognizes that new funds are not a long-term solution and expects that the need for new funding will significantly decrease as efforts are made to value natural capital and integrate these values into decision making.

Invest in natural capital

Government departments and agencies at all levels currently lack the capacity to meet their existing conservation commitments, or to plan proactively for conservation in the future.

The Round Table therefore recommends that the federal government invest in the establishment of a highly leveraged National Conservation Fund. Modelled in part on the existing federal-provincial infrastructure program, the initial investment should be matched by a variety of sectors, including all levels of government, NGOs, community groups, and others by a target of 3:1. This investment would support conservation initiatives across the country on a project-by-project basis.

Recommendation 19: The Round Table calls on the Prime Minister to make an initial investment of $250 million in a National Conservation Fund, and to encourage the provinces, territories and conservation community groups to match that investment by a target of 3:1. The fund would support priority conservation activities on a project-by-project basis consistent with the priorities outlined in this report, as well as other conservation initiatives across the country.

Set clear goals, targets and time frames, and measure progress

As outlined earlier in this report, there are several important initiatives underway that address conservation goals. The work of the Joint Resource Ministers' Councils on the Canadian Biodiversity Strategy and Canada's Stewardship Agenda demonstrates that

cooperation among levels of government results in conservation gains.

However, current approaches are not enough to adequately protect Canada's natural capital. As a result, in addition to meeting their existing commitments, governments need to set conservation goals and targets that reflect the changing context for conservation in Canada and measure their progress in achieving these goals and targets.

To help address this need, the Round Table recommends that the Prime Minister create a Conservation Council. The Council would be independent and multistakeholder, led by a prominent Canadian and include representatives from federal, provincial and territorial governments, Aboriginal communities, NGOs, industry and local communities.

The Council's work would be threefold. First, it would monitor the government's progress on the adoption of measures outlined in this report, particularly the priority recommendations, many of which relate to initiatives such as the Canadian Biodiversity Strategy and Canada's Stewardship Agenda. The Council would report back to the Prime Minister on progress within 18 months of the release of this report.

Second, the Council would lead the development of a conservation charter to guide conservation priorities in Canada over the next 10 years. The charter would incorporate the Round Table's vision for nature conservation in Canada and a whole land and seascape approach.

Finally, the Council would work with all sectors to raise awareness about conservation issues and to educate and engage Canadians in conservation and stewardship. One focus could be to encourage the participation of young people in conservation—possibly through the establishment of a conservation corps as a part of Canada's Youth Employment Strategy.[84]

Recommendation 20: The Round Table recommends the establishment of a Prime Minister's Conservation Council. The Council would monitor the government's progress on the adoption of measures outlined in this report, in particular the priority recommendations, many of which relate to initiatives such as the Canadian Biodiversity Strategy and Canada's Stewardship Agenda. The Council would report back to the Prime Minister on progress within 18 months of the release of this report.

The Council would also lead the development of a conservation charter that would guide conservation priorities over the next 10 years in Canada, based on the Round Table's vision for Canada's lands and seas.

Finally, the Council would work with all sectors to raise awareness about conservation issues in Canada, focusing particularly on the role of young people in conservation.

10.2 MEETING THE CONSERVATION CHALLENGE TOGETHER

As noted in Chapter 3, all sectors of society have a critical role to play in ensuring that our natural capital is conserved in its entirety for future generations. Consequently, the Round Table calls on all Canadians to participate in efforts to implement a new vision for conservation and position Canada as an international conservation leader by 2010.

In the first instance, the Round Table calls on the federal government to play a proactive and catalytic leadership role in the adoption and implementation of this national vision. Key federal priorities for action include putting the *federal government's* own house in order by ensuring adequate resources to meet existing commitments; requiring conservation planning in advance of issuing federal permits; supporting the development of a strong knowledge base for action; identifying and eliminating disincentives and barriers to conservation at the federal level; and finding innovative ways to provide conservation-related benefits to Aboriginal governments and communities.

As the order of government with direct responsibility for managing the majority of Canada's publicly owned lands, the Round Table calls on provinces and territories to adopt best practices in conservation planning, and to require planning in advance of new industrial development. *Provinces and territories* should also identify and eliminate key barriers to voluntary conservation initiatives by industry and other sectors of society.

The Round Table recognizes that *Aboriginal governments and communities* have always been and continue to be key stewards of Canada's lands and seas. Aboriginal governments have a crucial role in resource planning and development. The Round Table believes that conservation goals can only be met by continuing to work with Aboriginal governments to ensure that conservation both benefits nature and is consistent with Aboriginal community goals and values.

The Round Table recognizes *industry* as an emerging conservation leader. The Round Table calls on industrial leaders to adopt world-class conservation practices, including the establishment of protected areas as well as measures to conserve biodiversity on working lands. Companies can also demonstrate leadership through innovation: by finding new ways of using resources more efficiently, setting parts of their management areas aside for conservation purposes, and gaining third-party certification that their practices are environmentally sound.

The Round Table believes that *NGOs* have an important role to play in developing and promoting conservation solutions. It calls on NGOs to continue their work in developing and implementing stewardship partnerships in communities across the country, to ensure that all Canadians participate in achieving this vision for Canada.

Chapter 11

The Way Forward

It is only by working together—as governments, industries, communities, Aboriginal peoples and others—that we can secure our natural capital for our own and the world's benefit.

Natural capital represents a fundamentally new way of looking at the diversity of life and all its inherent values. It also provides a valuable new lens for considering how best to integrate ecological and economic decision making at all levels.

WE have a unique opportunity to position Canada as a leader in securing the natural capital on which our society and economy depend. However, this window of opportunity is rapidly closing, and immediate steps are required to ensure that Canada does not fall behind the international community in this regard.

This report outlines both a powerful new vision and pragmatic solutions for nature conservation in Canada. Our vision recognizes the importance of establishing and connecting protected areas while also maintaining the ecological integrity of landscapes and marine ecosystems under resource management. At the same time, we recognize that people are part of the landscape and that our conservation effort must recognize and support local and Aboriginal communities as stewards of the land.

THE STATE OF THE DEBATE: WHO PAYS FOR CONSERVATION?

One of the basic theses of this report is that the future of conservation rests on our ability to work with private landowners and resource companies operating on public land to achieve conservation goals. Further, any conservation burden that is placed on private landowners will have to be the subject of negotiation, compromise and compensation. Although this principle was generally accepted by the Conservation of Natural Heritage Task Force, it was not addressed further. Nevertheless, it can be assumed that putting this principle into practice will result in significant debate between landowners, land users, the environmental community and public authorities.

Recent difficulties in legislating an acceptable Species at Risk Act in Canada highlighted the issues involved in compensating landowners for conservation. For example, land with valuable mineral deposits will need to be treated differently from ranch land. Timberlands will need to be assessed individually and compensation will depend on whether partial or slower exploitation is acceptable environmentally. Land for corridors for large predators may still be suitable for certain kinds of limited development. Over time, it is expected that a system of compensation for partial restrictions will be developed.

Incentives and measures directed to landowners and business are already emerging and can play a significant role in addressing concerns. Examples such as Environmental Farm Plans and the Ecogifts Program acknowledge the contribution that landowners are making to conservation and seek to compensate them. These are important first steps toward addressing the expected debate.

NEXT STEPS

In its work on the Conservation of Natural Heritage Program, the Round Table found that incentives that recognize and encourage conservation by industry are an important measure for furthering conservation in Canada. Although this report outlines some key opportunities to engage industry more fully in conservation, it does not attempt to identify a comprehensive suite of incentives. The Round Table may delve more deeply into this area over the next year.

The Round Table encourages all sectors to work together to implement its vision for Canada's lands and seas. Governments alone cannot achieve these ambitious goals. It is only by working together—as governments, industries, communities, Aboriginal peoples and others—that we can secure our natural capital for our own and the world's benefit.

Appendix A

Glossary of Selected Terms

ABORIGINAL PEOPLES[85]

The Aboriginal peoples of Canada are defined by the Constitution Act (1982) as Indian, Inuit and Métis. Indians have traditionally been sub-divided into 2 groups: status and non-status. A status Indian is a person registered or entitled to be registered as an Indian for purposes of the Indian act. Status Indians are members of the approximately 600 bands across Canada, which are located mainly south of the 60th parallel on reserve lands within the province. The term non-status Indian is applied to people who may be considered as "Indians" according to ethnic criteria, but who, for various reasons, are not entitled to registration under the Indian Act. Métis people are defined as being people of mixed Indian and non-Indian ancestry. Statistics Canada includes under the category of Métis all people living in any part of Canada who claim mixed Indian and non-Indian ancestry. The Inuit are those Aboriginal peoples who live in Canada's northern most regions. Indian, Inuit and Métis people are separate peoples with unique heritages, languages, cultural practices and spiritual beliefs

BIO-BASED ECONOMY[86]

The emergence of an economy that is moving away from using conventional industrial processes that are not ecologically efficient and depend on non-renewable resources, toward more biologically based industrial processes that rely on renewable resources and cleaner, more ecologically efficient processes.

BIODIVERSITY (BIOLOGICAL DIVERSITY)[87]

The variability among living organisms from all sources including, among others, terrestrial, marine and other ecosystems, and the ecological complexes of which they are part. This includes diversity within species (genetic diversity), between species and of ecosystems.

BIO-PROSPECTING (BIODIVERSITY PROSPECTING)[88]

The exploration of biodiversity for commercially valuable genetic and biochemical resources.

BUFFER ZONE[89]

An area in or adjacent to a protected area surrounding a central core zone, in which non-destructive human activities such as eco-tourism, traditional (low-density) agriculture, or extraction of renewable natural resources are permitted.

CANADA'S NORTH (THE NORTH, NORTHERN LANDSCAPES)[90]

The definition of Canada's North varies depending on the context or its use in different parts of the country. In some cases, it may refer to Canada's three northern territories: Yukon, Nunavut and the Northwest Territories. However, the term is also often used to describe a wider area, delineated by common environmental processes, socio-economic conditions, geographic location, jurisdictions, policies, regulations or programs which may apply within these boundaries. In this report, unless otherwise indicated, Canada's North, the North and northern landscapes refer to the land and ocean-based territory that lies north of the line of sporadic permafrost, from British Columbia to Labrador.

CARBON SEQUESTRATION[91]

Capturing and securely storing carbon emitted from the global energy system. There are different types of carbon sequestration, including naturally occurring sequestration by plants, or technologically based sequestration, such as separating and storing carbon dioxide emissions from effluent streams.

CLIMATE CHANGE[92]
A change in measured quantities (e.g. precipitation, temperature, radiation, wind, cloudiness) within the climate system that departs significantly from previous average conditions and is seen to endure, bringing about corresponding changes to ecosystems and socio-economic activity.

CONSERVATION[93]
The maintenance or sustainable use of the Earth's resources in a manner that maintains ecosystems, species and genetic diversity and the evolutionary and other processes that shaped them. Conservation may or may not involve the use of resources; that is, certain areas, species or populations may be excluded from human use as part of an overall landscape/ waterscape conservation approach.

CONSERVATION BIOLOGY[94]
A relatively recent field of study that emerged in response to the existing and future risk of biodiversity loss. It is an interdisciplinary field that applies principles of ecology, biology, population genetics, economics, sociology, anthropology, philosophy and other disciplines related to the maintenance of biodiversity.

CONSERVATION ECONOMY[95]
An economy that promotes economic relationships that maintain ecological integrity while advancing social equity.

CORRIDORS[96]
The areas that link or border natural areas, including protected areas, and provide ecological functions such as hydrological flow, wildlife habitat, passage and connection for wildlife species, or buffering from impacts due to activities in adjacent areas. The use of corridors emerged as a conservation tool in response to habitat fragmentation. Corridors can vary from very small, linear strips of vegetation along a waterway connecting two small habitat patches, to broader and longer corridors that connect major landscape features, such as large strips of forests following a topographic feature such as a mountain range.

CUMULATIVE ENVIRONMENTAL EFFECT[97]
The effect on the environment that results from the incremental impact of a proposed action when added to other past, present and reasonably foreseeable future actions.

ECOLOGICAL INTEGRITY[98]
The degree to which an ecosystem has the ability to be self-sustaining over the long term.

ECOLOGICAL PROCESSES OR FUNCTIONS[99]
The processes or mechanisms that occur within an ecosystem, linking living organisms and their environment. These include production, decay, nutrient cycling, disturbance, successional development, energy flows and interactions between organisms within an ecosystem.

ECOLOGICAL REPRESENTATION[100]
A strategy for conserving biodiversity that aims to protect a representative sample of all natural regions. Determining what qualifies as a representative sample is achieved using a scientific methodology based on "enduring features," which are physical characteristics (such as climate, topography and soils) that exert a significant influence on the distribution of species and natural communities in an area. This approach was developed in part by conservation biologist Reed Noss, and pioneered by organizations participating in the Endangered Spaces campaign led by World Wildlife Fund Canada.

ECOLOGY
The study of the interrelationships between living organisms and their physical and biological environment.

ECO-REGION[101]
An ecoregion is a geographical area characterized by broad similarities or dissimilarities in features such as landform, geology, climate, vegetation cover, soil or water properties, and wildlife.

ECOSYSTEM[102]

A dynamic, multi-scale unit of interacting organisms and the non-living resources (e.g. water, soil) on which they depend, as a functional and integrated whole. Ecosystems vary in size and composition and display functional relationships within and between systems. The term generally refers to geographic units, which can be defined at multiple and often nested scales. For instance, the term may be applied to a unit as large as the entire ecosphere (planet) or to smaller divisions like the Arctic or small lakes.

ECOSYSTEM APPROACH[103]

A comprehensive and holistic approach to understanding and anticipating ecological change, assessing the full range of consequences, and developing appropriate responses. This approach recognizes the complexity of ecosystems and the interconnections among component parts. Among other things, the ecosystem approach recognizes that humans are an integral part of ecosystems and that human social and economic systems constantly interact with other physical and biological parts of the system.

ECOSYSTEM SERVICES (ECOLOGICAL SERVICES)[104]

The fundamental life-support services that are provided naturally by ecosystems, such as purification of air and water, detoxification and decomposition of wastes, regulation of climate, regeneration of soil fertility, and production and maintenance of biodiversity. The services are generated by a complex interplay of natural cycles powered by solar energy and operating across a wide range of space and time scales.

FRONTIER FORESTS[105]

Frontier forest is a term developed by the World Resources Institute to refer to the world's remaining large intact natural forest ecosystems. These forests are relatively undisturbed and large enough to maintain all of their biodiversity, including viable populations of the wide-ranging species associated with each forest type. To qualify as a frontier forest, a forest must meet seven criteria established by WRI.

GIS (GEOGRAPHIC INFORMATION SYSTEM)[106]

GIS refers to a computer program for collecting, storing, retrieving, transforming and displaying spatial data collected for analysis. GIS is capable of layering different kinds of information about one geographical space.

HABITAT[107]

The place or type of site where plant, animal or micro-organism populations normally occur. The concept of habitat includes the particular characteristics of that place, such as climate and the availability of water and other life requisites (e.g. soil nutrients for plants and suitable food and shelter for animals), which make it especially well suited to meet the life-cycle needs of the particular wildlife.

INTEGRATED PLANNING

Land-use planning that is holistic, or comprehensive, rather than driven by one single use, or by short-term economic gain. It aims to sustain ecological functions and biodiversity, and is aligned with public policy goals. The process involves considering the viewpoints of multiple stakeholders, from Aboriginal peoples to industry to local citizens.

INTEGRATED RESOURCE MANAGEMENT[108]

The use of an ecosystem approach to the management of two or more resources in the same general area; commonly includes water, soil, timber, range, fish and other wildlife, and recreation.

INVASIVE SPECIES (EXOTIC SPECIES)[109]

Refers to a species that has moved into an area and reproduced so aggressively that it has replaced some of the original species. Canadian examples include purple loosestrife and European starling.

LANDSCAPE[110]

A mosaic of habitat patches across which organisms move, settle, reproduce and eventually die.

LAND-USE PLANNING[111]

The systematic assessment of land and water potential, alternative patterns of land use and other physical, social and economic conditions, for the purpose of selecting and adopting various land-use options. Land-use planning may be conducted at various levels, including international, national, regional, district, ecosystem, project, catchment or local levels. The process should include participation by existing and potential land users, planners and decision makers.

NATURAL CAPITAL[112]

Natural capital is a relatively recent term describing a form of capital that can be contrasted to produced/economic capital and human/social capital. Natural capital generally refers to natural assets in their role of providing natural resource inputs and environmental services for economic production. There are three main categories of natural capital: renewable and non-renewable natural resource stocks (e.g. sub-soil resources, timber, fish, wildlife and water), land and ecosystems. Natural resource stocks are the source of raw materials used in the production of manufactured goods. Land is essential for the provision of space in which economic activity can take place. Ecosystems are essential for the services they provide directly and indirectly to the economy.

NATURAL RESOURCES[113]

Natural resources consist of the materials and capacities supplied by nature. They are divided into two categories: renewable and non-renewable resources. Renewable resources are those natural resources that are capable of regeneration. If properly managed, they should never be exhausted because they are continuously produced. Examples of renewable resources include tree biomass, fresh water and fish.

Non-renewable resources are those natural resources that cannot be replaced, regenerated or brought back to their original state once extracted. Examples of non-renewable resources include coal, crude oil and metal ores.

NATURE

Nature is not a precise, scientific term, and it can have different meanings in different contexts. In this report, nature refers to the Earth's biological diversity (including ecosystem, species and genetic diversity) and its ecosystems.

PRIMARY FORESTS[114]

The term primary forest has been interpreted in many different ways. In this report, primary forest refers to a forest ecosystem characterized by an abundance of mature trees, relatively undisturbed by human activity. Human impacts in such forest areas have normally been limited to low levels of hunting, fishing and harvesting of forest products, and, in some cases, to low-density, shifting agriculture with prolonged fallow periods. Such ecosystems are also sometimes referred to as "mature," "old-growth" or "virgin" forests.

PROTECTED AREA[115]

A geographically defined area of land and/or sea that is dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. To qualify as a protected area under Canada's NGO-led Endangered Spaces campaign, an area has to be permanently protected (usually through legislation) and prohibit industrial uses, including logging, mining, hydroelectric and oil and gas development, or in marine areas, prohibit oil and gas drilling, dumping, dredging, bottom trawling and dragging and other non-renewable resource exploration and extraction activities.

SEASCAPE

A sea-based mosaic of habitat patches across which organisms move, settle, reproduce and eventually die.

SPECIES[116]

A group of related individuals with common hereditary morphology, chromosome number and structure, physiological characteristics, and way of life, separated from neighbouring groups by a barrier that is generally sexual in nature—i.e. members of different species do not normally interbreed, and, if they do, the progeny are sterile.

SPECIES AT RISK[117]

Species or populations of animals and plants that are in danger of becoming extinct. Categories of species at risk under the recent Canadian Species at Risk Act include extirpated, endangered or threatened species, and species of special concern.

STEWARDSHIP[118]

The responsible management and use of natural areas and resources based on a balance of economic, environmental and social values, in order to sustain production of these amenities and values to people, and all life, today and for future generations. The essence of stewardship is taking responsibility for actions today that directly influence the protection of values for future generations. Good stewardship implies action directed toward the common good for society and the environment.

TRADITIONAL ECOLOGICAL KNOWLEDGE[119]

The knowledge base acquired by indigenous and local peoples over many hundreds of years through direct contact with the environment. This knowledge includes an intimate and detailed knowledge of plants, animals and natural phenomena; the development and use of appropriate technologies for hunting, fishing, trapping, agriculture and forestry; and a holistic knowledge or "world view" that parallels the scientific discipline of ecology.

WATERSHED[120]

A watershed is a geographic area of land bounded by topographic features and height of land that drains waters to a shared destination. A watershed also captures precipitation, filters and stores water, and determines its release. Watersheds vary in size. Every waterway (stream, tributary, etc.) has an associated watershed, and smaller watersheds join together to become larger watersheds.

WETLAND[121]

Land that has the water table at, near or above the land surface or that is saturated for a long enough time to promote wetland or aquatic processes and various kinds of biological activity that are adapted to the wet environment. Wetlands include fens, bogs, swamps, fresh and saltwater marshes, and shallow open water.

WHOLE-LANDSCAPE APPROACH[122]

An approach used in designing and implementing management and conservation plans that aim to maintain ecological integrity over the long term. A whole-landscape approach is comprehensive, considering landscape patterns and land-use patterns outside the management unit. It is an adaptive process, and captures the range of social, economic and ecological values that ultimately define human–ecosystem relationships. The approach requires an ecological context for decision making, reflecting an evolution in the way we assess and manage the impact of human activities on the natural environment. When applied in the context of land-use planning, a whole-landscape approach provides early and systematic guidance on the interrelationships between human activities (existing and planned) and ecosystem integrity over time.

WILDLIFE[123]

All non-domesticated and non-human living organisms, including not only vertebrate animals (mammals, birds, fish, amphibians and reptiles) but also invertebrate animals, vascular plants, algae, fungi, bacteria, and all other wild living organisms.

WORKING LANDSCAPE (WORKING SEASCAPE)

The portion of public and private lands allocated to industrial uses, such as forestry, mining, oil and gas exploration and development, hydroelectric development and others.

Appendix B

Program Participants

Note: This program was carried out over a number of years, and some participants' titles/organizations may have changed during that time.

ABORIGINAL LEADERSHIP INSTITUTE
Fontaine, Ted: Chair, Board of Directors
Walker, Rosa: Executive Director

AGRICULTURAL INSTITUTE OF CANADA
Carver, Roy: Executive Director
Tyrchniewicz, Edward W.: President

AGRICULTURAL PRODUCERS ASSOCIATION OF SASKATCHEWAN
King, Steve: Director, District 2
Ottenbreit, Ivan: Vice-President

AGRICULTURE AND AGRI-FOOD CANADA
Baltacioglu, Yaprak: Assistant Deputy Minister
Brand, Paula: Director
Brenning, Michele: Director, Environment Bureau
Doyle, Kevin: Rural Secretariat
Eilers, R.G.: Head, Land Resource Unit
Fitzmaurice, John: Regional Land Use Analyst, Prairie Farm Rehabilitation Administration, Manitoba Region
Henderson, Kim: Environmental Analyst, Environment Bureau
MacDuff, Jodine: Environmental Analyst, Prairie Farm Rehabilitation Administration, Manitoba Region
Martini, Roger: Senior Environmental Economist
Morrissey, Brian: Assistant Deputy Minister
Spencer, Carrie: Senior Environmental Analyst, Environment Bureau, Strategic Policy Branch

AIMM NORTH HERITAGE TOURISM
Simon, James: Consultant

ALBERTA ASSOCIATION OF MUNICIPAL DISTRICTS
Guyon, Bart: Vice-President

ALBERTA CONSERVATION ASSOCIATION
Hull, Steven: Managing Director

ALBERTA COUNCIL FOR SUSTAINABLE COMMUNITIES
Campbell, Robin: President

ALBERTA ENVIRONMENT
Dixon, Richard: Advisor, Policy Secretariat
McGregor, Cameron: Team Leader, Integrated Resource Management

ALBERTA-PACIFIC FOREST INDUSTRIES INC.
Wasel, Shawn: Business Unit Leader, Environmental Resources

ALGONQUIN ANISHINABEG NATION
Hunter, Jimmy: Representative

ALGONQUINS OF GOLDEN LAKE FIRST NATION
Sarazin, Dennis: Conservation Officer

ANIELSKI MANAGEMENT INC.
Anielski, Mark: President

APF ENVIRONMENTAL ADVISORY GROUP
Kamenz, Geri: Chair

ASSEMBLY OF FIRST NATIONS
Ignace, Lawrence: Senior Policy Analyst

ASSEMBLY OF MANITOBA CHIEFS TURTLE ISLAND ELDERS' COUNCIL
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ASSINIBOINE COMMUNITY COLLEGE
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ASSOCIATION FOR BIODIVERSITY INFORMATION
Curtis, Steve: Canadian Program Director

ASSOCIATION FOR VACCINE DAMAGED CHILDREN
James, Mary: Representative

ASSOCIATION OF CANADIAN EDUCATIONAL RESOURCES
Casselman, Alice: Representative

ASSOCIATION OF IRRIGATORS IN MANITOBA
Smallwood, Doug: Executive Director

ASSOCIATION OF MANITOBA MUNICIPALITIES
Briese, Stuart: Vice-President
Motheral, Wayne: President

AVALON INSTITUTE OF APPLIED SCIENCE
Hombach, Sven: Coordinator, Pollution Control and Waste Management
Yanko-Hombach, Valentina: President

BATTEAU CONSULTING LTD.
Gladue, G.C.: President

BIODIVERSITY STEWARDSHIP IN RESOURCE INDUSTRIES
Patterson, James: Coordinator

BLUE SKI COMMUNICATIONS
Overgaard, Paul: President

BLUENOSE ATLANTIC COASTAL ACTION PROGRAM
Cook, Brooke: Executive Director

BOREAL FOREST NETWORK
Forrest, Michelle: Project Coordinator, Environment

BRITISH COLUMBIA MINISTRY OF SUSTAINABLE RESOURCE MANAGEMENT
Bailey, Scott: Senior Policy Analyst, Corporate Policy and Intergovernmental Relations Branch

BRITISH COLUMBIA MINISTRY OF WATER, LAND AND AIR PROTECTION
Smith, Risa B: Head, State of Environment Reporting

C. MRENA CONSULTING LTD.
Mrena, Chuck: Consultant, Environmental and Natural Resources Management

CAMPBELL, MARR
Bruun, Anders: Partner

CANADIAN ASSOCIATION OF PETROLEUM PRODUCERS
Hyndman, Rick: Senior Policy Advisor, Climate Change
Luff, David: Vice-President, Environment and Operations

CANADIAN BOREAL TRUST
Elgie, Stewart: Executive Director

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Strankman, Peggy: Manager, Environmental Affairs
Van Der Byl, Dick

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Wiken, Ed: Chair

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Kunec, Diane: Programs Coordinator

CANADIAN ENERGY RESEARCH INSTITUTE
Bruchet, Doug: Senior Director, Environment and Energy Research

CANADIAN ENVIRONMENTAL ASSESSMENT AGENCY
Botkin, Wendy: Senior Program Officer
McNaughton, Daniel: Regional Director

CANADIAN FEDERATION OF AGRICULTURE
Friesen, Robert: President
Higginson, Jennifer: Executive Director
Howe, Nicole: Policy Analyst

CANADIAN GROUND WATER ASSOCIATION
Higginson, Jennifer: Former Executive Director
Lewis, Maurice: Executive Director
Rohne, Guy: Director, Manitoba Region

CANADIAN HERITAGE
Dufresne, Alain: Head, Conservation of Ecosystems, Conservation of Natural Resources, Quebec Sector
Granskou, Mary: Director, Parks Policy and Liaison, and former Round Table Task Force Ex-officio Member
Himelfarb, Alex: Deputy Minister
McNamee, Kevin: Director, Park Establishment
Neve, Barbara: Senior Editor, Executive Correspondence Office

CANADIAN HERITAGE RIVER SYSTEMS
Gibson, Don: National Manager

CANADIAN NATURE FEDERATION
Bingeman, Kristin: Research Coordinator
Krindle, Jackie: Past Chair
Spence, Christie: Manager, Wildlands Campaign
Whelan Enns, Gaile: Manitoba Director, Wildlands Campaign

CANADIAN PARKS AND WILDERNESS SOCIETY
Danyluk, Donna: Board Member, Newsletter Editor–Manitoba
Jessen, Sabine: Conservation Director, British Columbia Chapter
Johnson, Shelly: Conservation Projects Coordinator
Kidd, Scott: Conservation Director, Manitoba Chapter
Peart, Bob: Executive Director, British Columbia Chapter
Peepre, Juri: Executive Director, Yukon Chapter
Poulton, David: Executive Director, Calgary-Banff Chapter
Smith, George: National Conservation Director
Woodley, Alison: Federal/Northern Campaigner
Yeoman, Greg: Conservation Director, NWT

CANADIAN RECREATIONAL CANOEING ASSOCIATION
Taylor-Hallick, Kathy: President

CANADIAN TOURISM COMMISSION
McCourt, Lydia: Analyst

CANADIAN TURKEY MARKETING AGENCY
Ruchkall, Richard: Chair

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Kienholz, Esther: National Secretary

CANADIAN WILDLIFE FEDERATION
Baumgartner, Sandy: Manager, Programs and Communications

CENTRE FOR INDIGENOUS ENVIRONMENTAL RESOURCES
Bobiwash, A. Rodney: Director, Forum for Global Exchange
Breu, Reegan: Research Associate
Laliberté, Larry: Librarian
McDonald, Rodney: Sustainability Strategist
Morgan, Shaunna: Research Associate
Sellers, Patricia: Instructor/Curriculum Designer

CHETWYND ENVIRONMENTAL SOCIETY
Fofonoff, Marcie: Representative
Sawchuk, Wayne: Past-President

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Masniuk, Trish: Representative

CITY OF EDMONTON, COMMUNITY SERVICES, ALBERTA
Priebe, Bob: Coordinator, Conservation Planning

CITY OF SELKIRK, MANITOBA
Pawley, Chris: Councillor
Swiderski, Darlene: Councillor

CITY OF THOMPSON, MANITOBA
Taylor, Lynn: City Manager

CITY OF WINNIPEG, MANITOBA
Heming, Cheryl: City Naturalist
Smith, Harvey: Councillor

CLEAR LAKE ASSOCIATION, ONTARIO
Buck, Karen C.D.: President

CLUBS-CONSEILS EN AGROENVIRONNEMENT
Vachon, Elizabeth: Expert Consultant

COMMISSION FOR ENVIRONMENTAL COOPERATION
Carpentier, Chantel-Line: Program Manager, Environment, Economy and Trade
Herrmann, Hans: Head, Biodiversity Program

COMMUNITY COUNCIL OF SOUTH INDIAN LAKE, MANITOBA
Trewin, Gary: Mayor

CONGRESS OF ABORIGINAL PEOPLES
Palmater, Frank: Vice-Chief

CONSERVATION SCIENCE INC.
Noss, Reed: President and Chief Scientist

CONSUMERS ASSOCIATION OF CANADA
Desorcy, Gloria: Policy and Issues

COOKS CREEK CONSERVATION DISTRICT, MANITOBA
Brown, Garry: Chair

COUNCIL OF WOMEN OF WINNIPEG
Garlich, Carolyn: Chair of Civic Issues

CRITICAL WILDLIFE HABITAT PROGRAM, MANITOBA
Bilecki, Lori: Habitat Stewardship Coordinator
Hamel, Cary: Assistant Biologist, Manitoba Conservation Data Centre

DAIRY FARMERS OF CANADA
Bouchard, Réjean: Assistant Director, Policy and Dairy Products

DALHOUSIE UNIVERSITY
Willison, Martin: Professor of Biology and Environmental Studies, School of Resource and Environmental Studies

DAUPHIN DISTRICT CHAMBER OF COMMERCE, MANITOBA
Overgaard, Gail: Past-President

DEERWOOD SOIL AND WATER MANAGEMENT ASSOCIATION
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Turner, Bill: Technician

DELTA WATERFOWL FOUNDATION
Bailey, Robert: Vice-President

DIAVIK DIAMOND MINES INC.
Kenny-Gilday, Cindy: Senior Advisor, Northern Community Affairs

DUCKS UNLIMITED CANADA
Anderson, Michael G.: Canadian Director
Andrews, Rick: Field Office Biologist
Bogdan, Les: Manager of Conservation Programs, B.C.
Bruce, Greg: Policy Analyst
Butterworth, Eric: Senior Biologist, Western Boreal Region
Chekay, Doug: Manager of Public Policy, Prairie Region
Grant, Bob: Manager of Field Operations
Guyn, Karla: Conservation Programs Biologist
Lindgren, Cory: Biologist
Murkin, Henry R.: Chief Biologist
Stewart, Gary: Manager of Conservation Programs, Western Boreal Forest Region

EARTHBOUND ENVIRONMENTAL INCORPORATED
Friesen, Ken

ECOLOGICAL MALES AND FEMALES IN ACTION
Prymate, Joseph
Shute, Malcolm
Stewart, Ben

ECOLOGICAL MONITORING AND ASSESSMENT NETWORK
Stewart, Craig: Network Science Advisor

ECOMATTERS
Sheppard, Marsha I.: Soil Specialist

ECONETWORK
Prymak, Joseph: Volunteer

ECONOMIC DEVELOPMENT WINNIPEG
Holowchuk, Lisa: Economic Development Officer

ECOSTEM LTD.
Ehnes, James: Forest Ecologist and Data Analyst

ENSYN TECHNOLOGIES INC.
Smith, Stuart: Chairman of the Board, and Round Table Past Chair

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Reimer, Josh: President

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Blight, Steve: Project Leader, Environmental Economics Branch
Bond, Wayne: Head, Environmental Reporting, National Indicators and Assessment Officer
Bruce, Kathryn: Executive Director, Canadian Wildlife Service
Cooper, Elizabeth: Special Assistant, Office of the Minister
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Thompson, Gregory: Chief, Stewardship Division, Wildlife Conservation Branch, Canadian Wildlife Service
Vaughan, Hague: Ecological Monitoring and Assessment Network
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ENVIRONMENTAL LAW CENTRE
Williams, Robert R.G.: Staff Counsel

EVANGELICAL LUTHERAN CHURCH IN CANADA
Lorch, Rhonda: Office Manager

EVERGREEN COMMON GROUNDS
Heidenreich, Barbara: Land Trusts and Conservation Manager

FALCONBRIDGE
Robertson, Jamie: Regional Exploration Manager, North America and Greenland

FEDERATION OF ALBERTA NATURALISTS
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FEDERATION OF CANADIAN MUNICIPALITIES
Comeau, Louise: Director, Sustainable Communities and Environmental Policy
Fink, Sylvestre: Policy Analyst, Environmental Issues, Sustainable Communities and Environmental Policy

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Maytwayashiny, Diane
Richard, Kathy: Co-founder, Member of Council–National

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Ballinger, Kelly: Oceans Policy Advisor, Oceans Stewardship
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Chudczak, Chrystia: Director, Oceans Policy Branch
Hall, Peter: National Coordinator, Integrated Management, Marine Ecosystems Conservation Branch
Huffman, Kenneth J.: Senior Policy Advisor, Oceans Policy Branch
Karau, John H.: Director, Oceans Stewardship Branch
LeClair, Stephen: Chief, Policy Analysis
Powles, Howard: Director, Biodiversity Science Branch
Rutherford, R.J.: Project Manager for the ESSIM Initiative, Oceans and Coastal Management (Maritimes)

FOOTHILLS MODEL FOREST, ALBERTA
Storie, Mark: General Manager

FOREIGN AFFAIRS AND INTERNATIONAL TRADE
Parent, Gilbert: Ambassador for the Environment
Rekai Rickerd, Julie: Senior Advisor

FOREM TECHNOLOGIES
Stelfox, Brad: Forest Landscape Ecologist

FOREST CERTIFICATION WATCH™
Kiekens, Jean-Pierre: Editor

FOREST ENGINEERING RESEARCH INSTITUTE OF CANADA
Paillé, Gilbert: President and CEO

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Devries, Andrew: Consultant
Rotherham, Tony: Director, Forests
Vice, Kirsten: Vice-President, Environment, Forestry and Technology

FORT WHYTE CENTRE
Elliott, Bill: President and CEO
Toews, Aynsley: Education Coordinator

G.P.C. INTERNATIONAL
Lang, Otto: Senior Counsel

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Black, David: Executive Assistant

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Quaile, Geoff: Environmental Analyst

GRANT PARK PARENT ASSOCIATION, WINNIPEG
Moffatt-Razniatowski, Susan: Representative

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Barnaby, Joanne: Traditional Knowledge/
Environmental Management

HEALTH CANADA
Garrow, Robert: Senior Business Development Analyst,
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HUSKY ENERGY INC.
Worbets, Barry

HYDRO-QUÉBEC
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INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
Stadel, Angela: Advisor, Protected Areas
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INDIGENOUS ENVIRONMENTAL RESOURCES
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INDUSTRIAL FOREST SERVICES
Reimer, Tara: Forestry Technician

INDUSTRY CANADA
Featherman, Sidney: Senior Policy Analyst, Innovation
Policy Branch

INNU NATION (SHESHATSHIU, LABRADOR)
Ashini, Daniel: IBA Implementation Coordinator
Innes, Larry: Environmental Policy Advisor

INSTITUTE FOR BIODIAGNOSTICS
Westmacott, Garrett: Volunteer

INSTITUTE FOR WETLAND
AND WATERLAND RESEARCH
Howerter, David: Research Biologist

INTERNATIONAL INSTITUTE
FOR SUSTAINABLE DEVELOPMENT
Curtis, Shawna: Officer, Fund Development and Outreach
Glanville, William H.: Vice-President and CEO
Gonzaless, Virginia V.: Development Officer
Hardy, Patricia: Director of Development and Outreach
Parry, Jo-Ellen: Project Officer

INUIT TAPIRISAT OF CANADA
Nichols, Scott: Manager, Environment Department

ISLAND WASTE MANAGEMENT INC.
Antle, Paul: President and CEO

KEEWATIN COMMUNITY COLLEGE
Lauvstad, Doug: Director of Special Projects
Stepaniuk, Jeff: Natural Resource Management Technology

KERR-MCGEE OFFSHORE CANADA LTD.
d'Entremont, André: Health, Safety and
Environmental Coordinator

KETASHINOW TECHNICAL FIELDWORKS
Braun, Carl R.: Principal Owner

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Broadfoot, Duncan: Executive Member
McPhee, Gordon: District 2 Board Member

KRUGER INC.
Mercer, Peter: General Manager

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LAKE WINNIPEG WHITE FISH FLEET
Kristjanson, Robert T.: President

LICHEN FOUNDATION
VanGeest, Bill: Consultant

LITTLE SASKATCHEWAN RIVER
CONSERVATION DISTRICT
Falkevitch, Kristie: Resource Technician
Whitaker, John: Vice-Chair

LOUISIANA-PACIFIC CANADA LTD.
LeBlanc, Paul: District Forester, Swan Valley Forest
Resources Division
Waito, Barry: Woodlands Superintendent

LP CANADA LTD.
Donnelly, Margaret: Regional Biologist,
Forest Resources Division

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Pope, Frank: Board Member

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Barbeau, Armand: Consultant, Community and Resource Development
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Green, Catherine: Executive Assistant to the Minister

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Daniels, Joseph
Garson, John
Giuboche, Ernie
Head, Edward
Parker, Muriel
Sanderson, Theo
Traverse, Gordon
Turner, Pat
Wiebe, Jacinta
Wood, Ed

MANITOBA AGRICULTURAL CREDIT CORPORATION
Kibbins, Charlene: Director, Policy and Program Development

MANITOBA AGRICULTURE AND FOOD
Brunke, Richard: Agricultural Engineer
Crone, Jacques: Coordinator, Provincial Trails
Ewanek, John: Specialist, Soil and Water Management
Friesen, Tim: Land Stewardship Specialist
Gauer, Elaine: Soils Conservation Specialist
Hay, David: Soils and Water Management Specialist
Lee Craig: Assistant Deputy Minister
Scott, Leloni: Soils and Water Management Specialist, Central Region
Yusishen, Bryan: Regional Director, Central Region

MANITOBA AGRO WOODLOT PROGRAM
Tornblom, Shane: Field Manager

MANITOBA CATTLE PRODUCERS ASSOCIATION
De'Athe, Claire: Executive Secretary, Environment Chair, Resolutions Vice-Chair
Edwards, Rod: Communication Coordinator, and Editor, Cattle Country

MANITOBA CLEAN ENVIRONMENT COMMISSION
Carter, R.L.: Commissioner
Gibbons, Kenneth: Commissioner
Lecuyer, Gerard: Commissioner
Potton, James E.: Senior Professional Officer

MANITOBA COMMERCIAL LAMB PRODUCERS
Schroedter, Peter

MANITOBA CONSERVATION
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Arthur, John W.: Regional Water Manager
Beaubien, Yvonne: Parks and Natural Areas Branch
Bird-Billy, Ramona: Junior Program and Planning Analyst, Environmental Stewardship, Aboriginal Relations
Borowski, Peter: Senior Technician, Western Region–Forestry
Boyle, Harvey J.: Assistant Deputy Minister, Regional Operations Division
Brandson, Norman: Deputy Minister, Conservation Districts Commission
Bruyère, Bruce: Senior Program and Planning Analyst, Environmental Stewardship, Aboriginal Relations
Carlson, Greg: A/Coordinator, Inventory and Wood Supply
Carmichael, Bob: Chief, Game and Management, Wildlife Branch
Cook, Don: Director, Forestry Branch
Creed, Wendy: Digital Information Specialist, Parks and Natural Areas
Crichton, Vince: Wildlife Biologist
Delaney, Jeff: Assistant Coordinator, Practices and Planning
Dixon, Jackie: Water Management Officer
Dixon, Roy: Manager, Geomatics
Dorward, Kurt G.: Water Licensing Technician, Water Branch
Duncan, James R.: Chief, Biodiversity, Wildlife Branch
Dunford, Lyn: Forest Technologist, Forestry Branch
Fraser, Sherman: Fisheries Biologist
Gibson, Tammy: Sustainable Resource Management Branch, Environmental Stewardship Division
Grauman, Andrew: Forester, Western Region
Gray Bryan R.: Executive Director, Environmental Stewardship Division
Henderson, Vicki: Environment Office, Terrestrial Quality
Hernandez, Helios: Parks and Natural Areas Branch
Hildebrand, Wayne: Manager, Intergovernmental Affairs
Houghton, Jeff: District Supervisor
Hreno, Trent: Manager, Land Use Approvals
Hummelt, Cathy: Park Planner, Management, Planning and Heritage Rivers
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Jonasson, Harley S.: Director, Lands Branch
Jonasson, John
Jones, Geoff: Environment Officer, Terrestrial Quality
Kearny, Steve: Regional Director, Northeast Region
King, Albert D.: Senior Consultant, Programs
Knowles, Keith: Forest Health Biologist, Forestry Branch
Liebgott, Lisbeth: Coordinator, Water Efficiency
Lui, Tai: Planning Engineer, Water Branch
Madder, Ross: Assistant Project Manager
Mazur, Kurt: Avian Ecologist, Wildlife Branch
Missyabit, Ron: Director, Aboriginal Relations Branch
Moran, Tom: Regional Resource Manager, Wildlife and Land Management
O'Connor, Joe: Director, Fisheries Branch

Oswald, Barry: Resource Planner, Water Planning and Communications
Peniuk, Maureen: Parks and Protected Areas Specialist
Phillips, Floyd: Section Head, Terrestrial Quality
Porteous, Ken: Head of Interpretation
Prouse, Gordon: Director, Eastern Region, Operations Division
Richmond, Kelly-Anne: Parks and Natural Areas
Scaife, Barbara: Bio-economist, Fisheries Branch
Schroeder, Roger: Head of Protected Areas and Systems Planning, Parks and Natural Areas Branch
Schykulski, Ken: Parks and Natural Areas Branch
Scott, Carol A.: A/Director, Wildlife Branch
Stephens, Dick
Strachan, Larry: Director, Environmental Approvals Branch
Thompson, Lorimer: Chief, Fish Habitat Management
Thorpe, John: Regional Forester, Western Region–Forestry
Verbiewski, Barry: Aboriginal Liaison
Whaley, Kent: Regional Wildlife Manager, Northwest Region
Wilson, Rick: Parks and Natural Areas Branch
Zebrowski, Deirdre: Forest Ecologist, Forestry Branch

MANITOBA CONSERVATION DISTRICT ASSOCIATION
Baker, Rick: District Manager, Whitemud Watershed Conservation District
Delorme, Gerry: Resource Planner
Nylen-Nemetchek, Marcy: Resource Planner
Kopytko, Myles: District Manager, Little Saskatchewan Conservation District
Mazur, Jewel: District Manager, Lake of the Prairies Conservation District

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Kolisnyk, Walter: Chair, Board of Directors

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Collins, Jan: Tourism Development Consultant

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Dykman, Liz: Coordinator
Dubois, Jack: President, Steering Committee
Lindsey, Anne: Executive Director

MANITOBA EDUCATION, TRAINING AND YOUTH
McDonald, Christina: Divisional Policy and Planning Coordinator, and Sustainable Development Coordinator, School Programs Division

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MANITOBA FAMILY SERVICES AND HOUSING
Dustan, Leanne: Policy Analyst

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Fosty, Ken: Executive Officer
Hreno, John: Executive Assistant
James, Mike: Coordinator–Manitoba Envirothon
MacKenzie, Robert C.: Director
MacKenzie, Beverly
Uhmann, Eric

MANITOBA FUTURE FOREST ALLIANCE
Sullivan, Donald: North American Coordinator

MANITOBA HABITAT HERITAGE CORPORATION
Forsyth, Gerald
Poyser, Edward A.: Vice-Chair
Sopuck, Tim: Manager of Operations
Uhmann, Tanys: Habitat Stewardship Technician

MANITOBA HEALTH
Popplow, James R.: Medical Officer of Health

MANITOBA HYDRO
Barnes, Nick: Environmental Specialist, Major Projects Planning
Dudar, Michael: Division Manager, Customer Service and Marketing
Hamlin, Bill: Strategic Issues Officer
Johnson, Doug: Senior Environmental Specialist, Power Supply
Moffat, Tom: Division Manager, Transmission and Distribution
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Yarmill, Brian: Environmental Technician, Generation South
Zacharias, Allison: Environmental Officer
Zbigniewicz, Halina: Manager, Hydraulic Engineering and Operations

MANITOBA INDUSTRY, TRADE AND MINES
Bailey, Brian D.: Manager, Inspection and Rehabilitation Services
Jones, Charles: Geologist, Resource Management
Kaszycki, Christine: Assistant Deputy Minister, Mineral Resources Division

MANITOBA INSTITUTE OF AGROLOGISTS
Clift, Patrick: Member

MANITOBA INTERGOVERNMENTAL AFFAIRS
Boles, David: Community Planner
Jopling, David: Policy Planner
Pearce, Terry: Community Planner

MANITOBA LABOUR AND IMMIGRATION
Farrell, Thomas J.: Deputy Minister

MANITOBA LEGISLATIVE ASSEMBLY
Doer, Gary: Premier of Manitoba
Friesen, Jean: Minister of Intergovernmental Affairs
Gerrard, Jon: Leader of the Liberal Party
Lathlin, Oscar: Minister of Conservation
Selinger, Gregory: Minister of Finance
Wowchuk, Rosann: Minister of Agriculture

MANITOBA MÉTIS FEDERATION
Monkman, Olive: Vice-President, Interlake Region

MANITOBA MÉTIS WOMEN
Brass, Germaine: Cree Nation
Rinas, Diana: Winnipeg Region

MANITOBA MODEL FOREST INC.
Boulette, Dale: Director, Community of Manigotagan
Bruneau, Robert: Director,
Regional Municipality of Lac du Bonnet
Chief, Paul: Councillor, Brokenhead Ojibway First Nation
Christensen, Chris: Director,
Regional Municipality of Lac du Bonnet
Harry, Gerald: O'Hanley
Kaczanowski, Stan: President
Kynman, George R.: Publication Consultant
Muldrew, Cec: Director, Pine Falls
Raven, Garry: Director, Pine Falls
Smith, Carl: Secretary
Spence, Steve: Director, Pine Falls
Tokar, Walter: First Vice-President
Waldram, Mike: General Manager

MANITOBA–NORTH DAKOTA ZERO TILLAGE FARMERS ASSOCIATION
Doupe, Neil: Past Presdient/Director

MANITOBA PULSE GROWERS ASSOCIATION INC.
Hicks, Steve: Director

MANITOBA RECREATIONAL CANOEING ASSOCIATION
Brabant, Gary: Member
Brabant, Sandra: Member
MacKay, Jim: Secretary
Trachsel, Rosemary: Executive Director

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Hamilton, Dwayne: Member
Pringle, Connie: Member
Soprovich, Dan: Call Centre Supervision,
Riding Mountain National Park

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Goulden, Herb: Director
Jacobson, Leslie: Chair
Johnson, Terry: Director
Lenderbeck, Gaye: Director
Rempel, Margaret: Director
Van Ryssel, Neil: Vice-Chair

MANITOBA SHEEP ASSOCIATION
Pryzner, Ruth: Director at Large

MANITOBA TRANSPORTATION AND GOVERNMENT SERVICES
Christie, Rhian
Le Clair, Frank
Pachal, Rosaline

MANITOBA WILDLIFE FEDERATION
Rybuck, Ray

MANITOBA WILDLIFE HABITAT FOUNDATION INC.
Milian, L.: Chair, Board of Directors

MANITOBA WOMEN'S INSTITUTE
Kaastra, Renske: Chair, Ag + Rural Development Committee

MENNONITE CENTRAL COMMITTEE
Braun, Will: Justice Coordinator

MÉTIS NATION OF ALBERTA
Cardinal, Gabe: Vice-President, Zone II

MÉTIS NATION OF ONTARIO
Lipinski, Gary: Chair

MÉTIS NATION OF SASKATCHEWAN
Hanson, Norman: Regional Director

MÉTIS NATIONAL COUNCIL
Heighington, Paul: National Projects Coordinator
McCallum, Lisa: Métis Women's Spokesperson,
Métis Women's Section
Morin, Allan: Portfolio Holder
Rolt, Dwayne: Legal Advisor

MÉTIS PROVINCIAL COUNCIL OF BRITISH COLUMBIA
Mineault, Walter: Environment

MILLER THOMSON
Clark, Wade D.: Lawyer

MINING ASSOCIATION OF CANADA
Gratton, Pierre: Vice-President, Public Affairs
Peeling, Gordon: President

MINING WATCH CANADA
Kuyek, Joan: National Coordinator

MIXED-GRASS PRAIRIE STEWARDSHIP PROGRAM
Oliver, Gerry: Project Coordinator

MOHAWK COUNCIL OF AKWESASNE
Lickers, Henry: Director of Environment
Stevenson, Bob: Co-Chair, Environment, Species at Rick Act Aboriginal

MOTHER EARTH FIRST NATIONS
Wilson, Ardyth: Writer

MUSKWA-KECHIKA MANAGEMENT AREA
Porter, Dave: Member of Advisory Board

NATIONAL ABORIGINAL FORESTRY ASSOCIATION
Bombay, Harry: Executive Director
Gladu, Jean Paul: Policy Forester

NATIONAL DEFENCE
Shearer, Garnet: Environment, Property and Safety Officer, Canadian Forces Base Shilo, Manitoba

NATIONAL FARMERS UNION
Bobins, Martha: Youth President
Melnyk, Mandy: Youth Vice-President
Tait, Fred: National Vice-President

NATURAL RESOURCES CANADA
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De Franceschi, Joe: Chief, Development Coordinator, Canadian Forest Service
Donnelly, Ken: Assistant Director, Aboriginal Affairs and Sustainable Communities, Strategic Policy and Regional Initiatives
Frehs, Jim: Senior Policy Analyst, Sustainable Development and Environment
King, John: Senior Policy Analyst, Energy Sector
McAfee, Brenda: Science Advisor, Biodiversity, Science Programs
Pasho, David W.: Director, Sustainable Development Policy, Mineral Metal Policy
Rousseau, André H.: Secretary, National Forest Strategy Coalition, Canadian Forest Service

NATURE CONSERVANCY OF CANADA
Fortney, Gene: Director, Land Protection
Moore, Michael: Executive Director, Manitoba Region
Riley, John: Director, Conservation Science and Stewardship
Silver, Thea: Director, Government and External Relations

NEWFOUNDLAND AND LABRADOR FOREST RESOURCES AND AGRIFOOD
Deering, Keith: Regional Planner–Labrador

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Appendix C

Acknowledgements

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Appendix C

Endnotes

1 Reed Noss, Past President of the Society for Conservation Biology, "The Importance of Connections", presented at NRTEE Conference, Conservation that Works! November 2000.

2 An important objective of the Conservation of Natural Heritage Program is to encourage the spread and use of best practices and processes in conservation. To accomplish this goal, the Task Force commissioned a series of eight case studies of conservation initiatives in Canada. Each case study outlines best practices and innovative tools for nature conservation. For more detailed information on each of the case studies and draft findings, visit the Round Table's Web site (www.nrtee-trnee.ca).

3 Natural Resources Canada, *The State of Canada's Forests 2001-2002: Reflections of a Decade* (Ottawa, 2002).

4 Environment Canada, Freshwater, Quickfacts, www.ec.gc.ca/water/en/e_quickfacts.htm

5 Ibid.

6 See Ramsar Sites and Directory, www.wetlands.org/RDB/Directory.html

7 www.ducks.ca/conserv/wbf/

8 Bird Studies Canada, *Importance of Canada's Boreal Forest to Landbirds* (December 2002).

9 Environment Canada, Environmental Priority—Nature: Getting Environmental Results on Nature, www.ec.gc.ca/envpriorities/nature_e.htm

10 Environment Canada, *The State of Canada's Environment—1996* (Ottawa, 1996).

11 G. Walther and others, "Ecological Responses to Recent Climate Change," *Nature* 416 (March 28, 2002):389–395.

12 Although the Round Table acknowledges the importance of all of these threats, the measures outlined in this report do not address them all. Also, the discussion of threats is by no means meant to be an exhaustive or complete discussion of threats to nature.

13 Natural Resources Canada, *The State of Canada's Forests 2001-2002: Reflections of a Decade* (Ottawa, 2002).

14 Statistics Canada, *The Importance of Nature to Canadians: The Economic Significance of Nature-related Activities*, 2000.

15 Ibid.

16 Alberta Economic *Development, The Economic Impact of Visitors to Alberta's Rocky Mountain National Parks in 1998* (February 2000).

17 See generally Gretchen Daily, ed., *Nature's Services: Societal Dependence on Natural Ecosystems* (1997).

18 Lester R. Brown and others, *State of the World 1998*, (New York: W.W. Norton and Company, 1998).

19 Robert Costanza et al., "The Value of the World's Ecosystem Services and Natural Capital", *Nature* 387 (1997):253–260.

20 Amory Lovins, L. Hunter Lovins and Paul Hawken, *Natural Capitalism: Creating the Next Industrial Revolution* (Snowmass, CO: Rocky Mountain Institute, 1999).

21 Gretchen C. Daily and Katherine Ellison, *The New Economy of Nature: The Quest to Make Conservation Profitable* (Washington, DC: Island Press, 2002).

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23 See, for example, Storm Cunningham, *The Restoration Economy* (San Francisco: Berrett-koehler, in press).

24 "Iisaak: A New Economic Model for Conservation-Based Forestry in Coastal Old Growth Forests, British Columbia," paper presented at a workshop, Developing Markets for Environmental Services, A New Role for Forests in the Green Economy, organized by the University of British Columbia, October 2000.

25 Ecotrust Canada is a non-governmental organization based in British Columbia that works with coastal communities to promote sustainable resource use. For more information on their work, visit www.ecotrustcan.org

26 E.O. Wilson, *The Future of Life* (Toronto: Knopf Canada, 2002).

27 Commission on Life Sciences, National Research Council, *Biobased Industrial Products: Research and Commercialization Priorities* (Ottawa, 2000).

28 Natural Resources Canada, *The State of Canada's Forests 2001-2002: Reflections of a Decade* (Ottawa, 2002).

29 See Constitution Act 1867, sections 91, 92 and 92A.

30 See Guerin v. R. Supreme Court of Canada, 1984, which was the first case to set out the fiduciary duty.

31 One-window access to information, contacts and resources about these programs can be found at the Stewardship Canada Web site (www.stewardshipcanada.ca).

32 www.pyr.ec.gc.ca/EN/Wildlife/habitat/other_protected.shtml

33 See Reed Noss, Maintaining Ecological Integrity in Representative Reserve Networks—A Discussion Paper for WWF Canada and WWF US (1995).

34 Ibid.

35 Society for Ecological Restoration, SER Primer on Ecological Restoration (Tucson, AZ, April 2002).

36 See Sparrow v. The Queen, [1990] 1 S.C.R. 1075.

37 See R. v. Badger, [1996] 1 S.C.R. 771

38 Delgamuukw v. British Columbia, [1997] 3. S.C.R.

39 Professor Brad Morse (University of Ottawa), "Aboriginal Legal Issues in the Conservation of Natural Heritage," presentation to the Round Table Task Force on the Conservation of Natural Heritage. January 2002.

40 Ian McGregor, Director General, INAC, personal communication, April 1, 2003.

41 See *A Statement of Commitment to Complete Canada's Network of Protected Areas*, signed in Aylmer, Quebec, November 25, 1992 by representatives from the federal, provincial and territorial governments. Representatives of the Canadian Council of Forest Ministers and of Canada's four national Aboriginal organizations also attended the meeting and endorsed the Statement of Commitment. See Parks Canada Web site (www2.parkscanada.gc.ca/library/FPPCR/english/FPPCR_e02.asp).

42 Convention on Biological Diversity, text available at www.biodiv.org/convention/articles.asp

43 Government of Canada, *Canadian Biodiversity Strategy: Canada's Response to the Convention on Biological Diversity* (Ottawa, 1995), p. 73.

44 See Accord for the Protection of Species at Risk, available at www.speciesatrisk.gc.ca/strategy/accord_e.cfm

45 See *Endangered Spaces*, World Wildlife Fund Canada (October 2000).

46 www2.parkscanada.gc.ca/library/SPHA/en/30.html

47 Panel on the Ecological Integrity of Canada's National Parks, *Unimpaired for Future Generations? Conserving Ecological Integrity with Canada's National Parks* (Ottawa, 2000).

48 For more information, see Clayoquot Sound case study on the Round Table's Web site (www.nrtee-trnee.ca).

49 For more information on Vuntut National Park, see the Round Table's case study at www.nrtee-trnee.ca

50 bp.stage.saltmine.co.uk/environ_social/case_studies/north_america/index.asp#1

51 The forest industry in Canada has seen many other innovative solutions. For example, a growing number of companies have adopted criteria and indicators to monitor changes in biodiversity in areas they manage, as well as forest management guidelines aimed at protecting species and habitat diversity. See Wren Resources and Natural Resources Canada, *Canada's Forest Biodiversity: A Decade of Progress in Sustainable Management* (Ottawa, 2002).

52 See Sustainable Development Action, Canadian Success Stories, Species at Risk, www.canada2002earthsummit.gc.ca/sd_action/stories/species_risk_e.cfm

53 International Union for the Conservation of Nature and Natural Resources [IUCN—The World Conservation Union], *Indigenous and Traditional Peoples and Protected Areas—Principles, Guidelines and Case Studies* (Gland, Switzerland, 2000).

54 Final Report of the Task Force on a Canadian Information System on the Environment, *Sharing Environmental Decisions* (Ottawa, 2001).

55 See, for example, data compiled by George Hoberg, University of British Columbia, which suggests that Canada allocates less than 1 percent of total government spending to environmental protection (including nature conservation). The United States, in comparison, allocates almost twice that percentage of total spending.

56 *Integrated planning* refers to land-use planning that is holistic, or comprehensive, rather than driven by one single use, or by short-term economic gain. It aims to sustain ecological functions and biodiversity, and is aligned with public policy goals. The process involves considering the viewpoints of multiple stakeholders, from Aboriginal peoples to industry to local citizens.

57 From Chapter 10, "Northern Conservation Areas," *Report of the Mackenzie Valley Pipeline Inquiry*, vol. 2, part 2 (1977), and Justice Berger's covering letter to Minister Allmand accompanying the report, dated April 15, 1977.

58 World Wildlife Fund Canada, personal correspondence, December 2002.

59 World Resources Institute, *The Last Frontier Forests: Ecosystems and Economies on the Edge* (1997), available at www.wri.org/wri/ffi/lff-eng/

60 United Nations Environment Programme, *An Assessment of the Status of the World's Remaining Closed Forests* (Nairobi, 2001).

61 earthobservatory.nasa.gov:81/Newsroom/NasaNews/2003/2003032111806.html

62 Canadian Environmental Assessment Agency, *A Guide on Biodiversity and Environmental Assessment* (Hull, QC, 1996).

63 See www.cws-scf.ec.gc.ca/hww-fap/hww-fap.cfm?ID_species=87&lang=e

64 ABC's current priorities are intended to promote the growth and expansion of firms in today's rapidly changing environment. These priorities include supporting innovation, market expansion, Aboriginal tourism and a new generation of Aboriginal business owners. The program has just been amended to ensure that access to business opportunities is made easier. For more information, visit the ABC Web site (www.abc.gc.ca).

65 Personal communication, Canadian Information System for the Environment, April 2003.

66 The ESDI Initiative's final report can be found at the NRTEE's Web site (www.nrtee-trnee.ca).

67 Ibid.

68 *Room to Grow: Final Report of the Ontario Forest Accord Advisory Board on Implementation of the Accord*, presented to the Ontario Minister of Natural Resources, March 2002.

69 Steven Kennett, Canadian Institute for Resources Law, personal communication, November 2002.

70 Ecological fiscal reform is a strategy that redirects a government's taxation and expenditure program to create an integrated set of incentives to support the shift to sustainable development. For more information on EFR, visit the Round Table's Web site (www.nrtee-trnee.ca).

71 Examples provided by Chris McDonell, Tembec, and Andrew Devries, Forest Products Association of Canada.

72 For more information on the Evergreen Foundation, see the Evergreen Web site (www.evergreen.ca).

73 Canadian Biodiversity Information Network, at www.cbin.ec.gc.ca/issues/canlsttxt_e.cfm

74 Planning is underway for ALUS pilot projects in Ontario, Manitoba and Prince Edward Island. For more information on ALUS, see the Delta Waterfowl Foundation Web site (www.deltawaterfowl.org/programs/alus.html).

75 See the species at risk map on the Environment Canada Web site (www.sis.ec.gc.ca/msapps/ec_species/htdocs/ec_species_e.phtml).

76 Information about many of these programs can be found on the Stewardship Canada Web site (www.stewardshipcanada.ca).

77 See Areas of Concern in the Great Lakes Region, at www.great-lakes.net/envt/pollution/aoc.html#overview

78 Canadian Biosphere Reserves Association, at www.biosphere-canada.ca/home.asp

79 See Agriculture Canada, Backgrounder, Greencover Initiative, at www.agr.gc.ca/cb/news/2002/n20712be.html

80 See the Ontario Crop and Soil Improvement Association Web site (www.ontariosoilcrop.org/EFP.htm).

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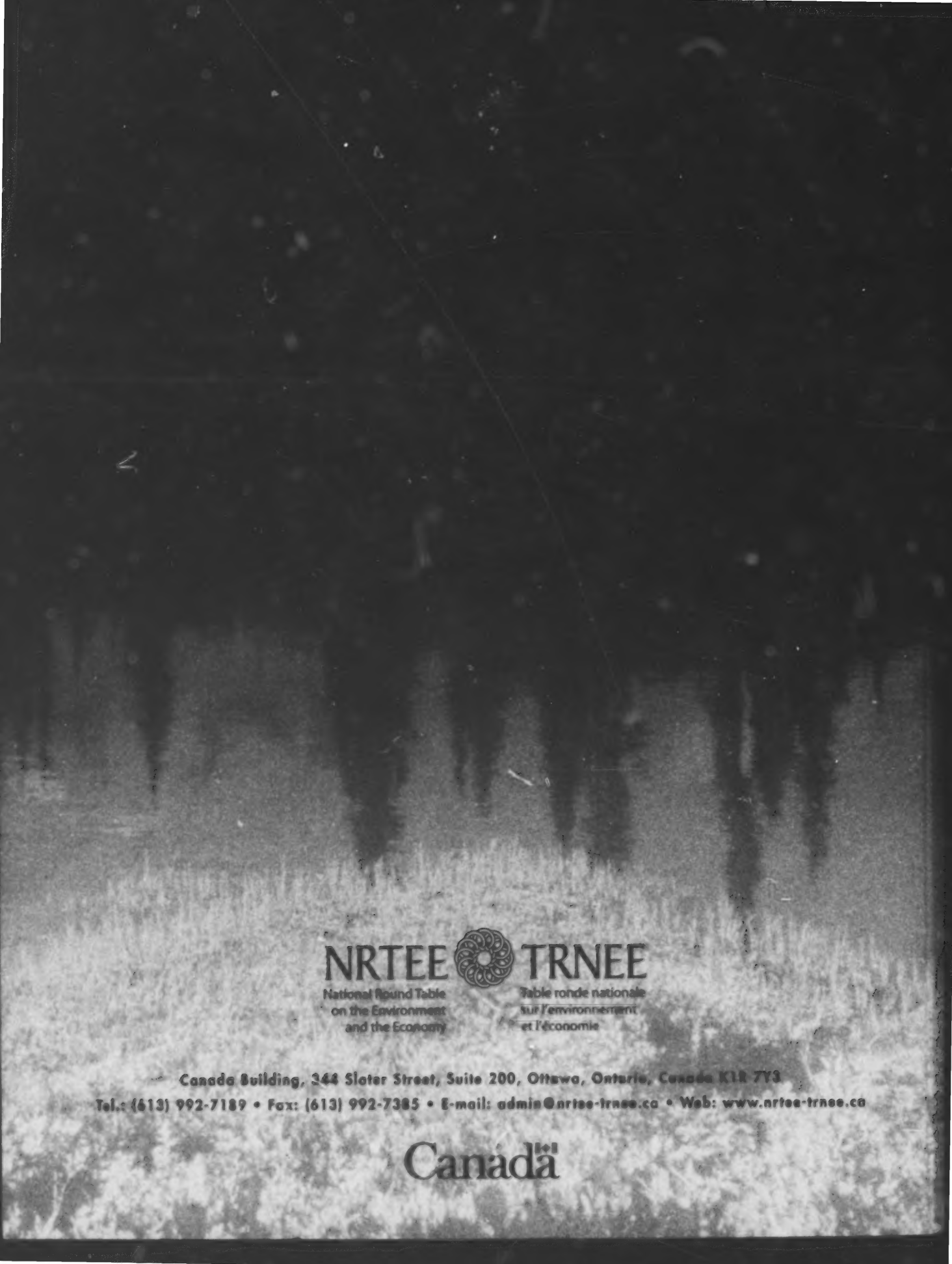

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